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The Journal of the *International College of Surgeons*

TENTH (VICTORY) NATIONAL ASSEMBLY
United States Chapter, Washington, D. C., December 6–8, 1945
Dr. Custis Lee Hall, General Chairman

FIFTH INTERNATIONAL ASSEMBLY
Lima, Peru (Date to Be Announced)
Prof. Dr. Francisco Graña, General Chairman

Vol. VIII *July-August, 1945* No. 4

Official Journal of the International College of Surgeons, Published Bimonthly
PUBLICATION OFFICE, 372 BROADWAY, ALBANY 7, N. Y.
Editorial and General Offices, 850 West Irving Park Road, Chicago 13, Ill.
Entered as second class matter April 17, 1945, at the postoffice of Albany, N. Y., under the act of March 3, 1879
Yearly Subscription: United States and Canada, $3.00; other countries, $4.00
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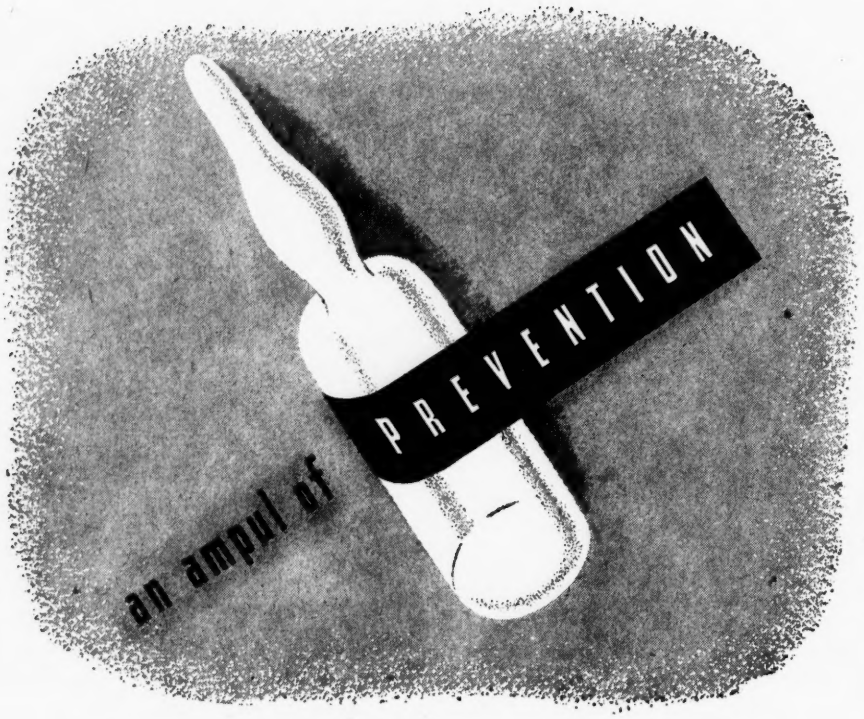

Postoperative distention and urinary retention may occur despite the most skilful surgical technic. Fortunately, the severe distress of "gas pains," discomfort of catheterization, and the need for enemas and symptomatic therapy may be obviated—and the patient afforded a smoother convalescence—by parenteral administration of one ampul (1 cc) of Prostigmin Methylsulfate* 1:4000 at the time of operation, repeated at 2-hour intervals for a total of 6 injections. Recognition of this fact by leading surgeons has made the prophylactic use of Prostigmin a routine measure in many hospitals.

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Original Articles

The Frontal Sinus as a Pathway of Infection to the Calvarium and Brain

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THERE is by far a greater number of calvarian and intracalvarian infections of frontal sinus origin than from all of the other nasal accessory sinuses combined.

Acute infection of the frontal sinus, especially following swimming in fresh water, seems to predominate, although a chronic infection may be responsible. Usually there is an acute exacerbation to start the spreading of the disease, but this does not always hold true.

The frontal sinus is the only cell that is in direct communication with the dura and brain, unless there is a dehiscence in the cell walls of an ethmoid or of the sphenoid sinus. This frontal communication is due to the minute opening in the posterior plate for the passage of the venae perforantes. Here again is an oddity in anatomy. This sinus is the only one whose venous drainage is directly into the large blood sinuses within the brain. Fortunately the frontal and sphenoid cells are less likely to become infected than are the ethmoid and maxillary cavities, but when they do, they cause greater damage to the surrounding tissues.

To comprehend the spreading of infection from the frontal sinus, one must consider the anatomy. The floor of the frontal sinus is composed of thin, dense compact bone. The posterior wall is a hard, dense ivory-like bone. The frontal plate is generally made up of two plates of compact bone; occasionally a medullary layer of cancellous bone is found.

The ostium is through the floor and may form a direct communication with the nose or may open into a duct of variable size and length.

The mucosa lining the frontal sinus is thin and friable and has a poor glandular and blood supply.

The blood supply to the frontal sinus mucosa is from a small branch of the anterior ethmoid artery which enters the sinus through the ostium. The venous drainage is through the venae perforantes, perforating the posterior wall.

Between the thin, periosteal lining and the bone itself in the frontal wall of the sinus, there are lymph spaces which communicate directly with the canaliculi of the haversian system.

TIME DOES NOT PERMIT A FURTHER ANATOMIC STUDY!

Let us consider what occurs in an acute infection or an acute exacerbation of a chronic infection of the sinus mucosa. First there is swelling of the mucous membrane, generally starting in the nasofrontal duct or in the ostium with pressure on the artery supplying the mucosa. This swelling, as a result of extension upward, finally involves the entire lining of the cavity, with pressure on the venae perforantes and stasis of the venous blood stream. This, of course, spells more edema. With the

leakage of serum into the tissues, the swelling is increased, and now a vicious cycle is instituted. Reticuloendothelial cells migrate into the infected area, and these are followed by leukocytes. This means increasing intrasinus pressure, with the probability of an interostial pressure greater than the pressure within the artery. In such event the blood supply to the sinus is cut off, and this is followed by necrosis of the mucosa and the periosteum. This dead tissue soon becomes loosened, so that the bone is exposed directly to the infecting organism.

Through the posterior plate, the infecting organism may gain access to the intracranial contents in three ways: First, necrosis of the bone with sequestration may permit the invasion. Second, the infecting organism may, by pressure and growth along the walls of collapsed venae perforantes, gain access into the vault of the calvarium. Third, by the erosion of the thin-walled veins, the infection may enter the intercranial blood stream directly.

It has been my experience to find a superficial abscess of the brain with the first two modes of transmission of the infecting organism. With the third type of transmission, the usual finding has been single or multiple abscesses of variable depth.

When the anterior wall is involved, the rapidity of the spread of the infection depends on the presence of a medullary layer of cancellous bone.

From the original symptoms of a sinus infection to the onset of osteomyelitis there are three factors to be considered: the thickness of the inner wall of compact bone; the virulence of the organism, and the resistance of the patient—in other words, the barrier of bone and the opsonic index of the patient.

Mosher, Furstenberger and others have described so thoroughly the spreading of osteomyelitis by retrograde thrombosis through the canals of Breschett and the large frontotemporal veins that further discussion is useless.

There has been quite a controversy as to the diagnosis and treatment of so-called malignant osteomyelitis and benign osteonecrosis with its sequestrations. It is my opinion that the density and thickness of the compact bone and the absence of cancellous bone are factors governing the type of the infection. If nature has the opportunity of walling off the intraosseous area of infection, sequestration may occur.

When the intrasinus infection causes a necrosis of the lining membrane, it throws open the canaliculi found between the periosteum and the bone. As this lymph stream leads directly into the haversian system, when the infection reaches a central haversian canal it may, by erosion, enter the blood stream through one or more of the endothelial-walled capillaries within this canal. These capillaries finally empty into the frontal veins or blood lakes, from which, by retrograde thrombosis, the entire frontal plate may become involved.

Cancellous bone is always found at or just above the junction of the anterior and the posterior plate. When the infection reaches this bone, osteomyelitis occurs. This, in our opinion, accounts for the number of osteomyelitic perforations of both the anterior and the posterior wall at or just above the upper limitations of the frontal sinus cavity.

When the infection does not enter the blood stream but remains in the slower lymph streams of the haversian system, it gives nature a sufficient length of time to wall all the infection into small iso-

lated areas which form sequestrations and abscesses.

Fever, pain and "Pott's puffy tumor," combined with the generalized symptoms of toxemia, simplify the diagnosis of a rapid fulminating osteomyelitis of the frontal bone.

On the other hand, the acute symptoms may apparently subside under treatment.* The swelling over the frontal area completely disappear and the pain and toxemia be relieved, as in the case of a recent patient who was up, dressed and around the ward and stated, "feel fine except for a slight headache in the morning." This he thought was due to constipation. His chart showed a normal temperature during the day with a rise of 1 degree (F.) or less each night. Roentgenograms taken daily over a six day period revealed a slow, progressive rise in fluid level, first in the right and then in the left frontal sinus. The final films showed these sinuses to be completely filled. The patient showed no physical signs of the progressing infection. This being the case of a colleague who was out of town, I hesitated to operate until his return the following day. At operation we found an extensive osteomyelitic involvement of the frontal bone extending upward to the coronal suture. There was a large perforation in the posterior plate of the sinus filled by herniated brain tissue due to an underlying abscess. And yet this man was up and about stating he was feeling better every day! The values shown in the laboratory reports were within a normal range except for a low red cell count and hemoglobin content. It was only by the roentgenograms that the progressive infection was recognized. I know of no greater adjunct in the diagnosis of the progress of frontal sinus infections than good, clear roentgenograms.

One must remember Mosher's teaching: that the roentgenographic evidences of the outer limitations of an osteomyelitic infection of the frontal bone are from seven to ten days behind the actual progress of the disease. A more reliable landmark is the outer limitations of the "Pott's" puffy tumor, as an underlying acute infection within the frontal bone will manifest itself by edema and swelling of the periosteum and its overlying soft tissues.

In my opinion, even this is no proof of the limitations of the infection; consequently, I make the bone incision from 3 to 4 cm. beyond the line of soft tissue edema, hoping that I may have gotten beyond any infected area.

If the bone capillaries do not bleed at this incision, I assume that there is an infected thrombus beyond the incision. I therefore bite away with rongeur forceps until free capillary bleeding is obtained.

For a chronic infection of the frontal sinus with no evidence of extension into the osseous tissue, I think conservative treatment should be followed.

As the floor of the frontal sinus is composed of thin, compact, brittle bone, I do not consider it a dangerous procedure to enlarge the frontal ostium. Of course, there is usually some necrosis of the bone from injury, but the cancellous bone is so distant from this enlarged ostium that there is little likelihood of osteomyelitis occurring.

Of course, the most conservative treatment is amputation of the anterior tip of the middle turbinate with the hope that this will allow sufficient drainage. If the patient's condition does not show immediate improvement, the sinus

* Administration of a sulfonamide compound (or penicillin) combined with localized intranasal shrinkage and irrigation of the nose with isotonic solution of sodium chloride.

should be sounded and by gentle local suction one should remove from the nasofrontal duct the plug of pus that may be interfering with drainage. In many instances such daily treatments have brought about an amelioration of all symptoms. If drainage continues after several days, it is advisable to enlarge the nasofrontal duct by rasping forward and outward; these directions avoid the danger of breaking through the cribiform plate, which extends forward often to the anterior wall. If this conservative intranasal operation does not bring about a cure, it is best to open the frontal sinuses above the superciliary ridge. I always follow this procedure for chronic frontal sinusitis or an acute exacerbation of a chronic infection.

In cases of acute infection of the frontal sinus following swimming and in all cases of osteomyelitic involvement, the frontal sinus should be opened immediately by the most radical procedure, i.e., removal of the anterior wall above the superciliary ridge.

The following technic is my standby: The sinus is entered at the midline of the anterior wall just above the superciliary ridge with a small half-round gouge. The limits of the sinuses are then measured by a soft silver probe. A grooved incision is made with a Killian V chisel by starting at the outer limitation of the sinus and cutting toward the central, or original, sound opening. This avoids splitting of the bone. When the slit is enlarged sufficiently to allow the entrance of a rongeur forceps, the entire anterior plate is removed. The upper edge of the anterior plate of the sinus is beveled to avoid a ridge, and the entire cavity is curetted of every vestige of mucosa and periosteum. I make it a point to irrigate the wound of all blood and secretion, so that I have a clear view of every nook and corner of the sinus cavity. It is only by cleansing the bone that one is able to see any small shreds of material that may still be clinging to the bone. Next I sound the nasofrontal duct, and if it is not of proper size I enlarge it with the rasp.

For the last few years I have been packing the sinus cavity with sulfathiazole or sulfadiazine powder, but in my last two cases I used penicillin with excellent results; now, I make a primary closure of the wound, which facilitates healing, and am thus able to discharge patients within a week.

SUMMARY

The peculiar anatomy of the bony walls of the frontal sinus, its arterial supply and its venous drainage with direct communication, via the venae perforantes, into the dura and brain and to the large blood sinuses within the brain are the factors that are responsible for this sinus being the most frequent cause of intracalvarian infections than all of the others combined.

The treatment of uncomplicated infections of the frontal sinus, both acute (except those due to swimming) and chronic, should, in my opinion, be conservative at first, progressing into greater and greater radical measures to meet the progress of the infection.

SUMARIO

La singular anatomía de las paredes huesos de los senos frontales, su drenaje arterial y venoso y su comunicación directa por via de las venas perforantes al través de la dura mater y el cerebro hasta los grandes senos sanguinosos dentro del cerebro son responsables por que este seno sea causa más frecuente de infección intracranial que todos los otros senos combinados.

El tratamiento de infecciónes de los

senos frontales sin complicación, agudas o crónicas (a excepción de aquellos causados por nadar), debiera en nuestra opinion ser conservativo al principio, y progresando a medidas más radicáles según el progreso de la infección.

RÉSUMÉ

Les infections intracalvariennes sont le plus fréquement dues aux inflammations des sinus frontaux. Cela s'explique par l'anatomie des parois osseuses de ce sinus, par son drainage arteriel et veineux et par so communication directe par les veines perforantes à travers le dure-mére et le cerveau avec les larges sinus sanguins à l'intérieur du cerveau.

Le trâitement des infections non-compliquées du sinus frontal (celles dues à la nage exceptées), qu'elles soient aigues ou chroniques, doit au début être conservatif. On adoptera des procédés de plus en plus radicaux si l'infection fait du progrès.

СВОД

Своеобразная анатомия костяных стенок фронтального синуса, его артериальный и венозный дренаж, его прямое сообщение через venae perfovantes, dura и мозг с большими кровянными синусами в мозгу — являются ответственными за то, что этот синус причиняет интракальварную инфекцию более часто, чем все остальные синусы вместе.

Лечение неосложенных инфекций фронтального синуса, как острых (за исключением причиненных плаванием), так и хронических, должно быть, по нашему мнению, сначала консервативным, постепенно прогрессируя к более радикальным мерам, соответственно прогрессу самой инфекции.

CHANGES OF DESIGNATION OF MEMBERS

The designations of grades of members of the United States Chapter have been changed to the following, with the approval of the International Board of Trustees:

1. Matriculate
2. Affiliate (this to take the place of the former "Associate Member")
3. Associate (this to take the place of the former "Member")
4. Fellow

These designations are now in effect, and members will be designated accordingly.

Spanish-speaking surgeons in the United States as well as in Latin America are invited to submit material (original articles, feature material or news) for the Sección en Español (Spanish Section). Contributions may be sent either to one of the Associate Editors for this section or to the general editorial offices in Chicago.

Arteriovenous Aneurysms in the Region of the Circle of Willis

From an Ophthalmologic Aspect

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IN this presentation we shall discuss three aspects of the subject. First, we shall make a rather brief summarization of aneurysmal conditions of the circle of Willis from an ophthalmic standpoint; second, and more important, we shall consider those conditions with disturbances of the contiguous veins or venous sinuses, again from an ophthalmic standpoint, for in this field ophthalmic symptoms and signs are outstanding; third, we shall deal with the surgical treatment of this latter group.

The second division is stressed because arteriovenous aneurysms in the region of the circle of Willis are almost purely surgical conditions, and as such constitute a proper subject for presentation before a surgical assembly. The relevance of the third division of our presentation is equally evident, and for the same reason.

The neurologist and the neurosurgeon frequently treat vascular pathologic conditions of the circle of Willis surgically only following a rupture of the aneurysm, since the characteristic symptoms do not appear until this has occurred. In general, the subjective and objective signs and symptoms are: (1) the presentation of a subarachnoid hemorrhage; (2) signs of general physical disease which might suggest or cause an aneurysm; (3) a previous history suggesting earlier subarachnoid hemorrhage, perhaps with signs and symptoms of a basal space-taking lesion, and (4) symptoms wholly in the realm of the ophthalmologist, such as changes from pressure on the optic nerve, the optic chiasm or the optic tract, and ocular motor disturbances, especially disturbances referable to the third nerve.

The arteriovenous aneurysms which fall within the second part of our presentation have much more clearly cut signs and symptoms. The history is of outstanding importance, especially if that of a traumatism, although this is not necessarily a constant finding. Arteriosclerosis and frequently syphilis are causes. In addition, a simple aneurysm of the ophthalmic artery may be present, or an arteriovenous communication between the internal carotid artery and the cavernous sinus, or an arteriovenous aneurysm within the orbit. All these usually have a few common signs and symptoms, which are: some exophthalmos (from a lesser to a great amount); evidences of centrifugal venous stasis; an evident pulsation of the exophthalmos; and a bruit, which may be subjective, objective or both and not uncommonly is of two types.

The vascular anatomy of the base of the skull can be likened rather roughly to a three-cornered stool. The one back leg of the stool is represented by the

basilar artery and the two paired legs by the internal carotid arteries; the seat of the stool may be considered perforated in the center for the brain stem; the anterior sides of the roughly hexagonal structure are represented anteriorly by the two anterior cerebral arteries, arising from the internal carotid arteries and connected by the short, rather broad anterior communicating artery; the posterior sides of this hexagon are the posterior communicating arteries, arising from the posterior cerebral arteries; immediately after these appear the paired terminal horns of the short basilar artery. The optic chiasm and the prechiasmal portions of the optic nerves underlie the anterior cerebral arteries and the interior communicating artery. The cavernous sinus, the terminations of the internal carotid arteries, the beginning of the middle cerebral arteries and the internal jugular veins lie just below or at the origins of the anterior and posterior communicating arteries, where these meet at the internal carotid artery. Variations from this description are not uncommon; they are, however, not tremendously significant. For instance, the posterior communicating arteries may continue as the middle cerebral arteries. The ophthalmic artery, which usually arises from the carotid artery before this has entered the cavernous sinus, frequently arises instead from the carotid artery within the cavernous sinus itself. The anterior cerebral arteries occasionally seem to arise from the middle cerebral arteries, although the latter are really the upper continuing portions of the internal carotid arteries. Figure 1 is a sketch from Walsh and King illustrating this vascular anatomy.

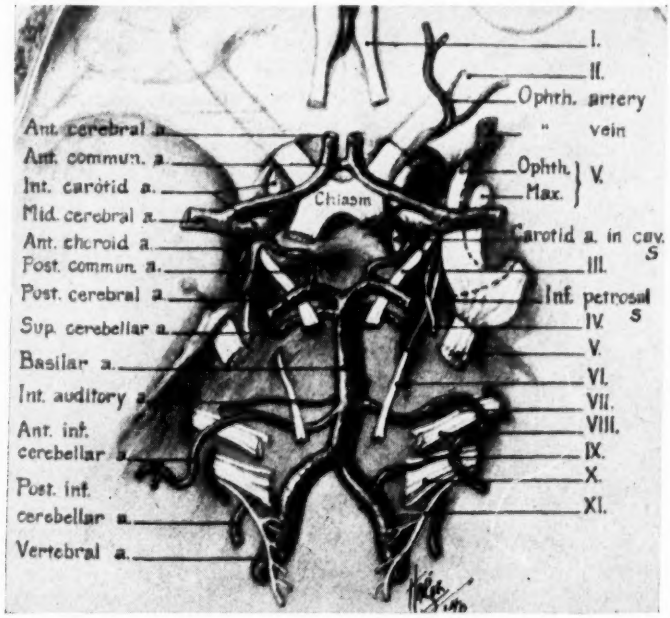

Fig. 1. Vascular anatomy at the base; the formation of the circle of Willis.

Arterial aneurysms of the circle of Willis, whether or not they are intra-

cavernous, may be roughly divided into five general subdivisions. Only one of these has exophthalmos as an optic accompaniment, and this is seldom, if ever, pulsating. Of these subdivisions, following Walsh's classification rather closely, the first is aneurysms accounting for unilateral defects in vision. Such aneurysms may be suspected especially in the presence of symptoms considered as unilateral ocular signs of multiple sclerosis. The diagnosis is seldom made, however, prior to the signs and symptoms of a rupture.

fully operated on by Grant, with permanent and uneventful recovery.

The third subdivision is aneurysms involving the optic tracts and resulting in incongruous visual field defects. Such aneurysms occasionally give signs of involvement of the contiguous cavernous sinus. They are probably the rarest of them all. Figure 5 is a schematic sketch of one such aneurysm, extracortical and beneath the surface of the brain, diagnosed after the rupture, presented by Dr. Levin of Dallas, Texas; figure .6 shows another such aneurysm, presented

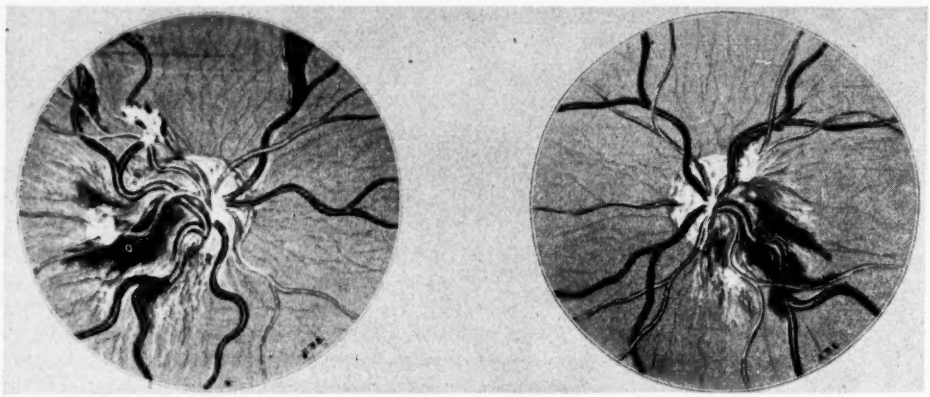

Fig. 2. The fundi of a patient with aneurysmal varix of the anterior cerebral arteries.

The second subdivision of this classification is aneurysms accounting for bilateral visual field defects, bilateral total blindness or bilateral nasal or temporal hemianopsia, frequently with hemorrhagic infiltration of the fundi. These aneurysms can usually be diagnosed prior to their rupture, and thus are neurosurgical problems. Figure 2 shows the fundi of a patient with such an aneurysm; figure 3, the aneurysmal situation of the anterior cerebral arteries as found at operation, and figure 4, the progressive changes in the campometric fields determined prior to the operation. This patient was successby Dr. Robertson, of Melbourne, Australia. The latter of these aneurysms was suspected for some time prior to its rupture, with confirmation of the diagnosis, and the patient's death. The patient had internal and partial external ophthalmoplegia with exophthalmos on the same side of the head as was the aneurysm.

The fourth subdivision is posteriorly situated aneurysms with signs suggesting cerebellar neoplasms. The fifth is aneurysms not usually attended by loss of vision but almost always giving ocular signs suggesting cavernous sinus symptoms with exophthalmos, though without

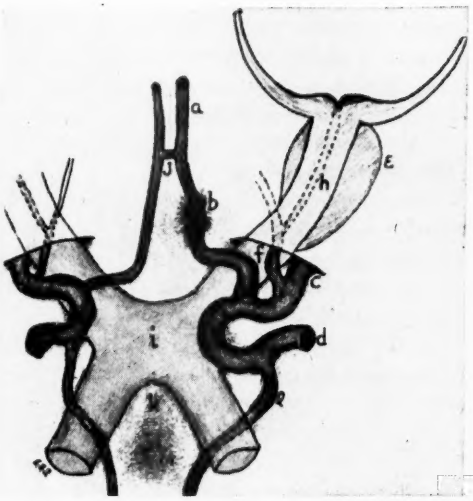

Fig. 3. Anatomic situation present at operation: *a*, anterior cerebral artery; *b*, area of localized arachnoiditis; *c*, internal carotid artery; *d*, middle cerebral artery; *e*, dilated perineural vaginal sheath; *f*, ophthalmic artery; *g*, optic foramen; *h*, central retinal artery; *i*, chiasm; *j*, anterior communicating artery; *k*, area of postchiasmal arachnoiditis; *l*, posterior communicating artery, on the right side beneath the optic tract and on left above the tract, as is usual.

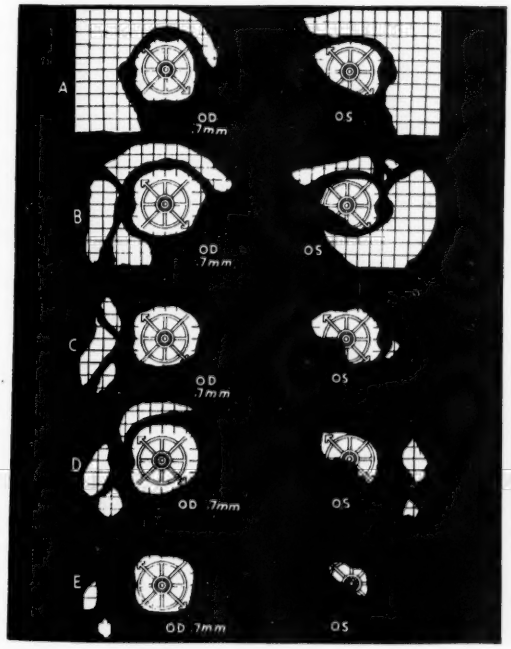

Fig. 4. Progressive changes in the fields of vision.

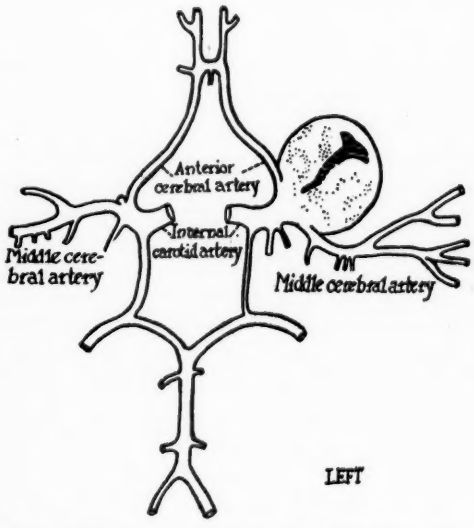

Fig. 5. Schematic sketch of an aneurysm reported by Dr. P. M. Levin, of Dallas, Texas (see bibliography).

Fig. 6. Photograph of aneurysm reported by Dr. Robertson, of Melbourne, Australia (see bibliography).

the pulsation and the bruit of the arteriovenous communication. These may extend anteriorly, prechiasmally or posteriorly, as far as the posterior communicating artery. Figure 7 illustrates such an aneurysm which had extended intraorbitally, having made its entrance through a defect in the orbital roof. Thus, the internal carotid aneurysm within the cavernous sinus expanded after having entered the orbit. There was some pulsation but no bruit. After surgical exploration of the orbit and confirmation of this diagnosis, the patient was successfully treated with roentgen rays. The aneurysm was not of an arteriovenous type.

Fig. 7. Intraorbital aneurysm, without bruit; point of entrance into the orbit through an orbital roof and apex defect.

The characteristic symptoms of these aneurysms have been briefly stated as they were classified. A tragedy connected with most of them is that so frequently they cannot be diagnosed, whether arteriosclerotic and atheromatous, traumatic, or syphilitic, prior to their rupture and the onset of the picture characteristic of subarachnoid hemorrhage. Arteriograms can at times be of some assistance.

ARTERIOVENOUS ANEURYSMS

The arteriovenous aneurysms of this region are usually carotid–cavernous sinus fistulae, though ophthalmic artery–cavernous sinus fistulas and communications between the internal jugular vein and the carotid artery occur rarely. De Schweinitz and Holloway, in their analysis of 313 cases reported, showed that trauma, either direct or indirect, was responsible in 70 per cent of instances. The remainder of the aneurysms either were spontaneous in origin due perhaps to congenital anatomic defects or were connected with such

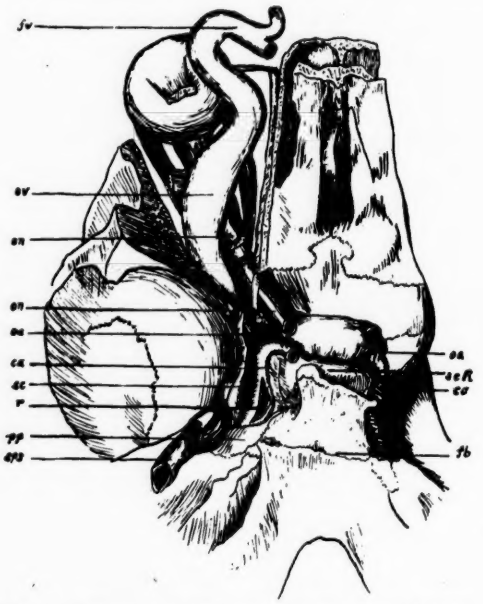

Fig. 8. Aneurysm, after Sattler (see text and bibliography for source of original presentation and identification of letters).

conditions as coughing, tumors of the brain which had broken into the orbit, internal hydrocephalus, syphilis or arteriosclerosis.

Figure 8 is after an illustration from Sattler's monumental article in the Graefe-Saemisch *Handbuch*. It illustrates a drawing from an anatomic preparation made in a case of internal carotid–cavernous sinus thrombosis with dissection and opening from above: The letters have the following significance: *ca*, the internal carotid artery, incised so that one can see the fistula on its medial wall opening into the cavernous sinus; *fb*, the fractured sella; *pp*, a broken portion of the apex of the petrous pyramid; *scR*, the sinus circu-

laris of Ridley; *sps,* a portion of the dilated ophthalmic vein; *fv,* the dilated frontal vein; *oa,* the ophthalmic artery; *sc,* the cavernous sinus; *on,* the optic nerve. The illustration is original with Delens, to whom Sattler has given credit. The drawing shows beautifully the tremendous venous engorgement which results from the carotid–cavernous sinus fistula, to which reference will be made again later in this paper. The ophthalmic vein, the superior petrosal sinus and the circular sinus are all decided examples of this engorgement. One can also see from this illustration why spontaneous intracranial ruptures, when they occur, as was emphasized by Baron in 1835, are usually of the cavernous sinus itself and not of the arterial portion.

Exophthalmos, pulsation of this and bruit are the cardinal and almost constant common symptoms of these aneurysms. There may also be other signs and symptoms, such as visual disturbances, almost certainly ocular motor disturbances, and disturbances of position and of gait. The exophthalmos is from slight to pronounced. Figure 9 is an illustration from a case in which the exophthalmos had been present for six to eight weeks. The most frequent position of the exophthalmos is down and out. Compression of the eyeball is painless, and the exophthalmos can frequently be reduced temporarily by such pressure, though as soon as it is removed the exophthalmos is reestablished. Digital pressure on the neck over the common carotid artery reduces the bruit. Several authors have reported that this pressure not uncommonly shows interference with the cardiac action. With the exophthalmos there is edema of the conjunctivas and of the lids, and while the condition is usually unilateral (and, rather interestingly, more common in the left eye), edema and minimal exophthalmos may appear in the opposite eye. There are several cases in the literature in which the intracranial pathologic changes advanced to such a stage that the pulsating exophthalmos became bilateral.

The pulsation of the exophthalmos can always be felt and frequently is visible, and it is always synchronous with the cardiac systole. The pulsation may at times be severe.

The bruit has three characteristics, or there are three types of this:

The subjective blow, frequently the first symptom noted, is described vari-

Fig. 9. Common type of pulsating arteriovenous aneurysm.

ously as a roar, a hum, a buzz, similar to the escape of steam, frequently so distressing as to prevent sleep, and is localized by the patient to one ear, to one side of the head or even to the entire skull. It is perhaps in the largest number of instances the first symptom of the condition.

The objective bruit has been described as a loud blowing murmur, synchronous with the systole, and naturally with the pulse, heard more or less readily with a stethoscope, over the eye, the forehead the skull on that side and down into the neck. The variability in its character is less than is the variability of the subjective bruit. The intensity of the murmur is somewhat more variable. One patient was reported on in whom it was so intense as to be audible 8 inches (20 cm.) from the skull.

The third type of bruit is a high-pitched whine or whistling note and is heard much less commonly in that it is seldom if ever found with traumatic aneurysms. It seems to be connected with, and also is diagnostic of, arteriosclerotic arteriovenous communications. The murmur is more frequently intermittent, and perhaps because of this it may be more commonly present, though overlooked by the examiner. It is an objective type of bruit.

The following 5 cases are briefly abstracted to illustrate the differences seen in these arteriovenous fistulas. Four of them are not the common type of cases. These five cases have been selected, however, from the total observed because of the many variations in symptoms and in treatment.

REPORT OF CASES

Case A (the usual type of case) (fig. 9) was an instance of spontaneous arteriovenous pulsating exophthalmos with or from arteriosclerosis. After the operation on the common carotid artery there occurred a complete cessation of symptoms. The anomaly in this case was considered as a simple internal carotid-cavernous sinus aneurysmal connection lying within the cavernous sinus.

In Case B, a 48 year old woman had progressive exophthalmos with pulsation, with the intercurrent development of secondary glaucoma and with massive formation of new blood vessels in the fundus. The condition was spontaneous and of the right eye. Ligation of the common carotid artery failed to ameliorate the symptoms; hence a transfrontal decompression of the orbit was done. It revealed arteriovenous aneurysm, and internal carotid-cavernous sinus communication, without arteriosclerotic changes and with massive dilatation of the orbital and ophthalmic veins. The aneurysmal fistula arose from the internal carotid artery above the cavernous sinus and from there entered the cavernous sinus, connecting therein with it. The patient's Wassermann reaction was 4 plus. The intracranial ligation was only partially successful.

The patient in case C, a man aged 24, had a direct blow to the orbit; within three weeks exophthalmos and pulsation with bruit developed. The exophthalmos and the bruit continued after fractional ligation of the common carotid artery. An exploration of the orbit showed a dissecting form of aneurysm passing through the sphenoid fissure into the orbit, extending from an original internal carotid-jugular bulb aneurysm, the result of fracture of the orbit at the base of the skull and the apex of the orbit.

Case D was that of a woman aged 60 who had a unilateral (right side) arteriosclerotic pulsating exophthalmos with bilateral bruit and with some bilateral edema. Complete recovery occurred only after bilateral ligation of the common carotid artery and further ligation of the right internal carotid artery. The surgical work was extended over a period of one year, and the patient was then free of her bruit and had an almost complete recession of her exophthalmos. The intracranial arterial supply was now only the basilar artery and its terminations, and the internal carotid artery on the left, and any reverse flow from the collateral circulation continuing on the right. In spite of her generalized arteriosclerosis, she had at no time signs of permanent damage.

The patient in case E was a Negro aged 59 with a spontaneous nontraumatic, nonsyphilitic pulsating exophthalmos on the right side with great bruit both objectively and subjectively, beginning signs of extension on the left side and other signs and symptoms suggesting an intracranial lesion, i.e., the arteriovenous aneurysm apparently secondary to this. The patient was transferred from Wills Hospital, after consultation with Dr. William Bates, to Jefferson Hospital under Dr. R. Jaeger, for intracranial air studies; if these revealed anything significant, he was to undergo craniotomy and Dandy's procedure of intracranial ligation. The patient was not in good physical condition when transferred. The air studies showed no signs of intracranial disease. The patient made an almost complete recovery after a unilateral ligation of the common carotid artery.

SURGICAL TREATMENT

The surgical approach to these arteriovenous aneurysms from a *venous* standpoint has as its hope an ascending thrombosis through the venous channels and is not at all satisfactory. Ligation of the orbital vein may be indicated when necessary, but this is not the cure for the fistula. Other forms of aneurysmorrhaphy, not including Dandy's approach, are formidable procedures and are not to be recommended except under most extraordinary circumstances.

A consideration of the pathologic process and its mechanics is the clue to the treatment. An arteriovenous aneurysm has occurred as a fistula between two hydrostatic currents of unequal force, which in this case is from the arterial to the venous flow. The pulsation and the bruits are the result of this unequal pressure and the interchange of arterial and venous blood through the fistula. A reversal in the venous flow occurs because of the impact of the arterial flow—resulting in venous stasis, in edema and in an increase in the blood volume of the entire venous bed. The exophthalmos is maintained through this. The water hammer impact of the arterial flow continues the widening of the fistula and drains blood from the arterial cerebral channels which has been thus diverted. For cure, the venous stasis must be relieved to correct the exophthalmos; the arterial supply to the fistula must be halted without causing cerebral anemia or, on the venous side, permitting spontaneous cerebral thrombosis to occur in the venous canals; and the fistula must be closed to stop the bruit, as well as to relieve simultaneously the faulty hydrodynamics. Intracranial ligation should be ideal, but it is not necessary if the condition will respond to the less formidable extracranial cervical approach. Ligation of the external carotid artery is of no value whatsoever, as would be expected. A primary ligation of the internal carotid artery has, as many men have pointed out, a high incidence of cerebral complications, in that it reduces abruptly and totally the blood volume into the brain. It stimulates a reversal of blood flow in that portion of the vessel distal to the fistula (low pressure area in the internal carotid artery between the fistula and the ligature); thus it may drain large quantities of the blood from the cerebral channels, and thereby be responsible for thrombosis of the cerebral vessels with hemiplegia and with death.

The surgical intervention must reduce pressures within the carotid sinus without causing thrombi or emboli. There is no doubt that the carotid sinus is concerned with and responsible for regulating the circulation in the brain, for here such circulatory regulation is far more important than similar regulatory mechanisms in the extremities or even in the abdomen. It is obvious, therefore, that Dorrance was correct when he stated: "Ligation of the internal carotid with a building up of pressures back of the ligature in the bifurcation, and the consequent retardation of the heart and reduction of blood pressure, would contribute to and accentuate any deficiency of cerebral blood supply."

Ligation of the common carotid artery after diagnostic compression of this vessel reduces the blood flow in the internal carotid artery by more than 50 per cent, so that in effect the internal carotid artery has become a branch of the external carotid, and in certain cases this vessel may be an important channel of collateral circulation to the brain. This flow of arterial blood from the ex-

ternal carotid into the internal carotid artery makes possible and permissible a later subsequent ligation of the internal carotid artery if that is necessary; such ligation reduces the high incidence of cerebral complications associated with primary ligations of the internal carotid artery. Further, as Dorrance said, "Anomalies of the circle of Willis are so rarely uncompensated that deficiency of collateral circulation because of them cannot explain all of the cerebral complications which follow ligation of the carotid vessels."

These operative procedures should be done under local anesthesia, so that the patient is conscious and his general physical condition therefore evident; untoward cerebral symptoms, if they occur, then can be seen immediately and the circulation permitted to flow prior to permanent closure. Clamps and vessel plugs are not recommended. When a subsequent ligation of the internal carotid artery is done, the wound should not be closed for twenty-four hours, so that if cerebral symptoms do develop, circulation in this vessel can be immediately reestablished. Black silk sutures are advisable. The common carotid artery should be tied down rather slowly, so that the circulation is not stopped within a period of less than fifteen or twenty minutes. The tying of the internal carotid artery need not be done quite so slowly. Careful postoperative observation, however, is more important following closure of the internal carotid artery, as a secondary operation, than with closure of the common carotid.

CONCLUSIONS

The purely arterial aneurysms of the circle of Willis are difficult of diagnosis; the diagnosis must be made frequently by elimination rather than by affirmation, and it is most commonly confirmed after a rupture. The arteriovenous aneurysms of and in the neighborhood of the vessels composing the circle of Willis do not present tremendously complex diagnostic problems. They lend themselves well to surgical treatment. The surgical approach, excluding Dandy's intracranial ligation (consideration of which is not included herein), consists preferably (and following the usual well known preliminary diagnostic procedures) of ligation of the common carotid artery and subsequent to this, when necessary, ligation of collateral vessels, such as the lingual, facial, occipital and temporal arteries, and especially a later ligation of the internal carotid artery. After ligation of the common carotid artery, the internal carotid artery actually becomes a branch of the external carotid artery by reason of the anastomoses from the corresponding arteries of the opposite side of the neck and face. The later ligation of the internal carotid artery will permit development of sufficient collateral circulation centripetal to the cranial cavity to prevent almost wholly those complications connected with a primary ligation.

The bibliography which follows has 363 references, dating from 1807 to the time of writing.

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The following bibliography is an attempt to bring up to date a list of the major part of available references on the subject. It is an assistance to rapid review of any portion of the subject. Those references given in the bibliography with full title have to do largely with intracranial aneurysms not classically arteriovenous. Those references with the title of the paper omitted are concerned largely with arteriovenous aneurysms. Many, however, cover both subdivisions. The bibliography thus cannot be inflexibly subdivided as outlined. The arrangement, however, should be of assistance.

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SUMARIO

Las aneurismas puramente arteriales del circulo de Willis son dificiles de diagnosticar; el diagnostico con frecuencia debe ser hecho por eliminación en vez de afirmación y es más comunmente confirmado después de rotura (ruptura).

Las aneurismas arteriovenosas del vecindario de los vasos que componen el circulo de Willis no presentan complejos problemas diagnosticos y a veces se prestan facil a la extirpación quirurgica.

El acceso quirúrgico (excluyendo la ligatura intracranial de Dandy, que no se discute aquí) consiste de preferencia (habiendo seguido todos los procedimientos bien conocidos para el diagnóstico) en ligatura de la arteria carótida común y después de esta, si es necesario, ligatura de los vasos colaterales, tal como las lingual, facial, occipital y la temporal arterias, y especialmente, al fin, ligatura de la arteria carótida interna.

Después de ligatura de la arteria carótida común, la carótida interna se convierte actualmente en rama de la arteria carótida externa, por razón de la anastomosis de las arterias correspondientes del lado opuesto de la cara y del cuello.

La ligatura más tarde de la arteria carótida interna permitirá el desarrollo de suficiente circulación colateral centripetal a la cavidad cranial para evitar casi por completo las complicaciones resultando de la ligatura primaria.

La bibliografía que sigue incluye 363 referencias, del año 1807 hasta la fecha de este articulo.

RÉSUMÉ

Les véritables anévrismes artériels du cercle de Willis sont difficiles à diagnostiquer; le plus fréquement le diagnostic est fait par élimination plutôt que par affirmation, et il est confirmé généralement après la ruptûre. Les anévrismes arterio-véneux intéressant les vaisseaux environnants qui forment le cercle de Willis ne offrent pas de problêmes diagnostiques très difficiles à résoudre. Ils se prêtent à l'ablation chirurgicale. L'approche chirurgical (dans cet article, la ligature intracraniale de Dandy, que nous ne discuterons pas ici) consiste préférémment dans la ligature de l'artère carotid commune et subséquemment, quand cela est nécessaire, dans la ligature des vaisseaux collatéraux, telles que la linguale, la faciale, la temporale et l'occipitale. Après la ligature de l'artère carotide commune, l'artère carotide interne de-

(Continued on page 332)

The Naval Medical Officer's Surgical Problems in Amphibious Warfare

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NAVAL surgical experience and procedure in the South Pacific are modified by a number of factors, chief among which are the great overwater distances involved and the amphibious type of activity.

It is hard to visualize the great distances in the Pacific. Perhaps this comparison may give a concept of the size of the area in which the armed forces are operating. One thinks of the United States as a fairly large country. If one were to superimpose areas equal to that of this country on the Pacific theater of war, it would take nine "United States" to cover it. And so far as the major problem of transporting men and supplies is concerned, that theater is all water.

Amphibious warfare has produced decidedly new patterns of activity. More than ever before, naval medical officers have been ashore doing field duty. The Marine Corps, whose medical activities are in the hands of naval medical personnel, both officer and enlisted, is larger today than was the whole Navy during the last war. In addition, numerous naval units are functioning ashore, such as construction battalions and the various groups that deal with the administration and operation of advance bases and services of supply.

Read before the United States Chapter of the International College of Surgeons, Philadelphia, Pa., Oct. 3, 1944.

The opinions or assertions contained herein are the private ones of the writer and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

All of this means planning: planning hospital housing and equipment, planning the flow of medical supplies, planning the evaculation of casualties, planning the allocation of medical personnel. All of this must be with a view to the special problems which each particular strike presents, such as climatic conditions, terrain and endemic diseases. Finally, the planning must be integrated with that of the military event in prospect. The more I saw of the many angles that medical preparation involved and the successful way in which they were handled, the prouder I became of the Navy's Bureau of Medicine and Surgery.

To give an idea of how these problems would vary from strike to strike, here are two sample situations.

Military expediency calls for the taking of an atoll that has long been in enemy hands. That means that a strong enemy force is concentrated on a narrow strip of island a mile or two long and at most one or two hundred yards wide. In such an action all the casualties will occur within a few days or even hours. The first ones must be handled on the very ships that brought in the striking force or in a hospital ship that is standing by. Only the later ones can receive their definite treatment on the atoll itself. After a few days there are likely to be no more major casualties, so that hospitalization needs will be minimal. (And while I am speaking of atolls and medical problems, think of the job of disposal of some thousands

of enemy dead in a coral soil that rises only a few feet above sea level.)

Quite different is the situation where a beach-head and a base are to be made on a small segment of a large island thinly held by the enemy, with a view to by-passing strong enemy positions and neutralizing them by air power. Here the initial casualties are far less likely to be numerous. Full definitive treatment can be given ashore within as little as ten hours after a landing and certainly within twenty-four hours. However, in such an area there are likely to occur major casualties for weeks and months after D day, and correspondingly greater and better hospitalization facilities are needed.

But whether the site be atoll or large island, the evacuation of casualties must be to a fully equipped facility, not 5 or 10 miles behind front lines, as in a Continental theater, but 500 to 1,000 miles away. The transportation must be by ship or plane: by ship for practically all casualties on D day and for many minor casualties thereafter, by seaplane for serious casualties almost from the beginning, and by land plane as soon as an air strip is available, in from four to ten days.

An important part of the preparation for a strike is the training of the medical personnel involved. The medical objective is to bring the best possible surgical treatment as close as possible to the time and place of action. The medical officers with combat units are of necessity of a younger age group, so as to be able to cope with the rigors of a combat area. Their surgical experience is therefore likely to be correspondingly less. It is therefore all the more necessary to instruct them in the specific problems they are likely to face, and in what way accepted surgical procedures may have to be modified to meet the conditions. For example, balanced traction cannot be applied to a fracture in a patient who must be moved several times and over some hundreds of miles, and a double spica cast of the hips must not have a spread of over 28 inches (70 cm.), the maximum width of a bunk in ship or plane.

To help the younger surgeons at the front, roving teams of older, more experienced surgeons act as consultants and, if need be, bear a hand in difficult cases.

Turning now to specific surgical procedure, there is considerable debate as to how much should be done how far forward. But one keeps returning to the cardinal principle that advanced area surgical treatment should be as adequate as circumstances permit. Therefore, every effort must be made to create favorable circumstances for good operation as close to the front as possible, for twenty or thirty minutes of careful attention to a wound within a few hours of its occurrence is worth more than three months in the best base hospital in the rear.

An adequate wound toilet first of all requires a thorough inspection of the injury. This may call for an enlarging of a wound of entry or exit, by incision or through a fascial plane. Mechanical cleansing is helped and the view of the wound improved by irrigating it with solution of sodium chloride, which is amply available in vacoliter flasks. The irrigation is best performed by means of a rubber tube or catheter whose tip is thrust into the bottom of the wound, so that dirt, blood clots and foreign bodies are flushed to the surface. This also brings into view any bleeding points, which are caught and ligated. But bleeding should not be checked by tourniquet or by packing. The former is rarely needed, even as an emergency

measure, and packing only too often masks slow bleeding behind the pack and encourages infection and secondary hemorrhage.

Obviously dead and devitalized tissue without blood supply is cut away, but this does not mean wound excision, a relic of the last war, before chemotherapy had arrived to control infection. While the cutaneous edges may be freshened, tongues of skin are not sacrificed if they have an adequate blood supply through their base, for such a peninsula of skin may shorten the time of healing by many days.

Shell fragments and missiles are removed only if they present in the wound or are easily accessible. To this rule there is one important exception: magnesium fragments derived from bombs. These must be carefully sought for and removed, because they exert a highly irritant and destructive chemical action.

There is no time for suture of tendons or nerves as a rule. Nevertheless it is usually possible to find the severed ends at opposite sides of the wound and to bring them together with a loose tie or suture. If this is done, the work of the surgeon at the base hospital will be greatly simplified.

The local use of sulfonamide compounds has been much debated. The disrepute into which this has fallen in the minds of some is largely due to the careless way in which some surgeons thrust a handful of the drug into an open wound, where it acts chiefly as a foreign body. Many others are convinced of the usefulness of sulfonamide compounds in the wound, provided that a reasonable quantity is properly distributed with the tip of the gloved finger into all the nooks and corners of the wound.

While wounds should not be tightly packed, the use of petrolatum gauze lightly filling a defect greatly facilitates subsequent dressings. Wounds are not closed by suture, chiefly to guard against gas bacillus infection. Of 6 deaths from this condition that occurred on the hospital ship, 3 were in instances of primary wound suture. The important exception to this rule, of course, is in case of wounds of the face.

The splinting of an extremity with an extensive wound of the soft tissues is as necessary as the splinting of a fracture. This is particularly true because the patient may have to be moved quickly and without warning. The splint will be his best protection against further shock.

Certain special types of wounds should be mentioned. Wounds in the chest that are not immediately fatal do amazingly well under conservative measures. Of 100 men with such wounds seen on the *Solace,* only one died. The cardinal points in the management are these: A sucking wound must be closed as promptly as possible. This is most simply done under field conditions by means of a petrolatum-soaked battle dressing held in place by sutures. Care must be taken not to convert a wound into a sucking wound by removing a large foreign body. I know of a case in which a palm-sized piece of shell fragment halfway through the wall of the chest was carefully bandaged in place at the front. Later, its removal in a well equipped surgery 500 miles to the rear made a sucking wound that could promptly be attended to. A hemothorax is not aspirated unless there is evidence of positive pressure or of infection.

Patients with wounds in the chest involving the collapse of a lung are kept at rest for "seasoning" for several days before an attempt is made to evacuate them, especially if they are to be flown out. In the first few days after

injury such patients, like those with an acute spontaneous pneumothorax, become dyspneic and cyanotic on the least exertion or at altitudes over 3,000 feet (900 meters). Yet a few days later, again like the patients with pneumothorax, they are fully accommodated to their reduced respiratory capacity and stand evacuation by plane well.

Patients with wounds of the head also seem to benefit greatly by a similar period of seasoning before being evacuated.

For patients with abdominal wounds, life itself depends on adequate surgical treatment in the first golden hours after the injury.

The field of the neurosurgeon is a limited one. Either he must be practically at the front so as to see the men with neural injuries within hours of their being wounded, or else he can do nothing until many months later, after all infection has subsided. He ought therefore to be on a surgical team in a combat area, or else in a neurosurgical service in the United States.

Fractures form an exceedingly important group of cases, comprising, as they do, fully 15 per cent of all casualties. Nearly 75 per cent of the fractures are compound. Their management therefore includes the treatment of the wound as well as that of the fracture. A meticulous wound toilet is necessary to guard against serious infection. Gas gangrene is six times as frequent in wounds with involvement of bone as in those without such involvement. In cleansing the wound, bone fragments that have lost their periosteal attachment and consequently their blood supply must be removed.

In civil practice the treatment of fractures embodies the concept of first reduction and then fixation. In front line surgical practice that concept has decidedly to be modified. Reduction is of relatively minor importance, chiefly because of the surprising small amount of displacement that follows the impact of a high velocity missile. I have seen a compound fracture of the femur in which the middle third of the shaft had been completely shattered, yet the position of the upper and lower thirds was surprisingly good.

Fixation is the matter of chief concern. From the point of view of field conditions, particularly with regard to the need for transportation by stretcher, boat, ship or plane, fixation with plaster has proved the most satisfactory method. The difficulties in handling plaster in steaming jungles and tropical rainy seasons can be imagined, but they have been overcome. The precaution of splitting the cast, however, must never be forgotten.

The Thomas splint has its uses, but also its definite limitations. The most common mistake made in its application is to exert traction on the foot in order to relieve pain at the site of the fracture. Such traction is all too frequently applied over the shoe. Many hours may elapse before the type of dressing can be changed, and by that time on the dorsum of the foot under the shoe laces there has developed a pressure necrosis that takes longer to heal than the fracture for which the splint was applied.

The use of opiates calls for certain precautions. The most common error is to give the full dose of ½ grain (0.03 Gm.) in a morphine "syrette" to a lightly wounded man who could have walked to the rear with little or no assistance, but who now has to be carried on a stretcher, which requires several men and makes an excellent target for snipers. The other mistake is to fail to record on a tag attached to the patient the time and size of the

dose, so that later attendants are led to give a second large dose, with possibly disastrous results.

The proper tagging of the patient is a point of greatest importance. It is the only way in which the next medical officer to see the patient can learn of the nature of the wound, what was done for it, and what was given in the way of tetanus and gas gangrene prophylaxis and opiates. It will tell him, too, when the wound needs to be dressed again, and so perhaps spare the patient an unnecessary dressing or even the risk of a new infection. Such tags must be shielded against obliteration by rain, sweat, mud and wound secretions.

The record as regards tetanus in this war is one of the major medical triumphs. Those who remember the many cases of tetanus that occurred in the last war, some of them developing many months after injury in France and in the wake of a plastic operation performed here at home, will particularly appreciate this point. In over two and a half years, I have knowledge of a single occurrence of tetanus, and that was in a man who had failed to receive toxoid prophylaxis. Among the Japanese, who do not use routine toxoid prophylaxis, tetanus is fairly common.

Gas gangrene has on the whole been comparatively rare. Its occurrence has been a function of the time that elapsed between the time a man was wounded and the time when he first received treatment. Thus on Guadalcanal, where the wounded were all seen fairly early, gas gangrene was rare. In over 4,000 wounded seen on the *Solace* at that time there were only 13 who had gas gangrene. On the other hand, in larger islands, where a man might be wounded at dusk in an advanced position from which he could not be evacuated until next morning and another few hours could elapse before he reached a dressing station, the condition was more frequent, the incidence being as high as 2 or 3 per cent. That was before the advent of penicillin; the record should be better from now on.

These, then, are a few of the surgical problems that confront the naval medical officer. There are many more that I have not touched upon, the telling of which could prove interesting did time and the censor permit. But this I can say: One may be sure that the medical officers of the United States have the ability to solve them. It was a never ending source of pleasure to see the many ingenious devices and gadgets that the medical personnel contrived to meet local needs. As fine an operating room light as I have seen anywhere was made out of half-inch (1.3 cm.) pipe, jeep lamp bulbs and empty gasoline tins whose inner shining surfaces were fashioned into correct parabolic curves. There were almost as many different automatic soap dispensers as there were dressing stations, and they all worked. X-ray men rigged their developing tanks so that one end projected out of the dark room and made possible a wet plate reading at a moment's notice. The craftsmen on repair ships, who could fix anything from a chronometer to a propellor shaft, would duplicate within twenty-four hours almost any surgical instrument placed before them.

As the campaign progresses, there will be new problems. But they will be solved, and in solving them our young surgeons in the field not only will grow in skill, judgment, self reliance and resourcefulness, but will make contributions of lasting value to the whole field of surgery.

SUMMARIO

Tanto la experiencia como los procedimientos de la cirugía naval en el

Pacífico se han visto modificados por la naturaleza anfibia de la guerra y por las grandes distancias marinas, que complican los servicios de abastecimientos y la evacuación de los pacientes.

El primordial objetivo en estas circunstancias consiste en llevar la mejor terapéutica quirúrgica lo más cerca posible del sitio del combate y en el momento más adecuado. Ello se ha conseguido mediante una instrucción preliminar de los cirujanos más jóvenes, para ponerlos en condiciones de atender los tipos de casos con los que tienen mayor probabilidad de enfrentarse y gracias tambien a la ayuda de los equipos quirúrgicos formados por cirujanos de más edad y de mayor experiencia en colaboración con los consultores apropiados, y, finalmente, disponiendo del equipo más especial e idóneo desde el momento mismo en que comienzan las operaciones de desembarco.

Entre las lecciones quirúrgicas que hemos aprendido se hallan las siguientes: (*a*) la necesidad de una "toilette" de la herida, incluyendo una inspección completa, limpieza, control de la hemorragia mediante ligadura, eliminación exclusiva del tejido necrosado o no viable y aproximación simple de los nervios y tendones seccionados a fin de facilitar la exacta reparación subsiguiente: (*b*) la necesidad de inmovilizar las extremidades que sean asiento de extensas heridas de los tejidos blandos; (*c*) la importancia del cierre de las heridas abiertas del tórax; (*d*) la necesidad de retardar la evacuación de los individuos con heridas craneanas o torácicas. En el tratamiento de las fracturas, que son generalmente compuestas y que constituyen un gran porcentaje de las bajas totales, debe tenerse muy en cuenta no sólo la inmovilización de la fractura sinos todos aquellos factores relacionados con la transportabilidad precoz y contínua del paciente. En consecuencia, la mejor manera de obtener la inmovilización en estos casos consiste en la aplicación de un enyesado. Como resultado del empleo universal del toxoide tetánico como profiláctico, no ha habido practicamente casis de tetanos entre los heridos de los Estados Unidos. La gangrena gaseosa ha sido comparativamente rara, debido principalmente a la prontitud con que se han tratado las heridas.

RÉSUMÉ

L'expérience et les procédures chirurgicales navales ont été modifiées dans l'Ocean Pacifique par la nature amphibie de la guerre et les grandes distances maritimes, qui ensemble compliquent l'approvisionnement du matériel et l'évacuation des blessés et des malades. La première considération est de fournir aux blessés le meilleur traitemen chirurgical aussitot que possible et aussi proche que possible du champ de bataille. Cela a été accompli par l'enseignement préliminaire donné aux jeunes chirurgiens pour les soins qu'ils doivent donner aux blessés. Des chirurgiens de grande expérience et des consultants sont toujours disponibles. Il y a en aussi une suffisance de tout ce qui est necessaire dés que la bataille commence.

On a appris qu'une toilette précoce et méticuleuse des plaies comprenant l'inspection soigneuse, le nettoyage, le contrôle de l'hémorragie au moyen de ligatures, l'ablation de tout tissu mort ou non-viable et la simple approximation des tendons et des nerfs coupés afin de faciliter la reparation exacte subsequente, est de la première importance. Il faut immobiliser au moyen d'atteles toute extrémité le siège de grandes blessures des tissus mous. Toute blessure aspirante de la poitrine demande

l'occlusion de la plaie. Il ne sera apporté aucun retard dans l'évacuation des blessés de la tête et aussi des blessés de la poitrine. Pour les fractures, qui presque toujours sont ouvertes (compound), non seulement on immobilisera la fracture mais on veillera a l'évacuation précoce du blessé. Le plâtre de Paris est généralment le plus utile des matériaux immobilisants. Grâce à l'emploie prophylactique du toxoid antitétanique, il n'y eut pas un seul cas de tétanos parmi les blessés militaires et marins des forces américaines. La gangrène gazeuse fut relativement rare; cela est en grande partie due à la promptitude avec laquelle les blessés furent soignés.

СВОД

Флотский хирургический опыт и методика в Великом океане подвергнулись изменению под влиянием земно-водного характера войны и больших морских расстояний, которые осложнили как и снабжение, так и эвакуацию.

Первой задачей было доставить наилучшую хирургическую помощь насколько возможно ближе к времени и месту действия. Это было достигнуто предварительной тренировкой молодых хирургов в обращении с типами наиболее вероятных случаев, помощью старших более опытных хирургов в роли консультантов, и доступностью адэкватного и специально приспособленной аппаратуры с самого начала высадки.

Среди хирургических уроков данных этим опытом были следующие: необходимость раннего и старательного туалета раны, включая старательный осмотр, очистку, контроль кровотечения лигатурой, иссечение только безусловно мертвых или умирающих тканей, простое сближение прерванных сухожилий и нервов с целью облегчить последующую аккуратную починку; необходимость иммобилизацию миной конечностей, которые являются очагом широких ран мягких тканей; важность закрытия сосущих ран груди; необходимость отложить эвакуацию солдат с ранами груди или головы. При лечении переломов, которые обыкновенно являются сложными и составляют значительный процент всех случаев, необходимо иметь в виду не только иммобилизацию перелома, а также и то что больной должен подвергнуться быстрой и продолжительной эвакуации. Поэтому гипс был найден самым полезным минным материалом. В результате общего профилактического применения токсоида, почти не было случаев столбняка среди раненных в армии Соединенных Штатов. Газовая гангрена случилась сравнительно редко, главным образом благодаря быстроте помощи.

ANEURYSMS IN REGION OF CIRCLE OF WILLIS

(Continued from page 325)

vient une branche de l'artère carotide externe par raison des anastomoses avec les artères correspondantes du côte apposé de la face et du cou. La ligature retardée de la carotide interne permettra le développement d'une circulation collatérale centripétale de la cavité cranienne protégeant contre presque toutes les complications que pourrait entrainer la ligature primaire.

La bibliographie qui accompagne l'article renferme 363 réferences datant de 1807 jusqu'à nos jours.

NOTE: The Russian summary will be published in the next issue.

Huge Pedunculated Fibrolipoma

Report of Two Cases and Review of the Literature on Vulvar Fibromas

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WHILE pedunculated fibrolipomas are relatively common tumors and have been reported as occurring in a multiplicity of sites,[1] it is extremely exceptional in urban centers to encounter cases in which they have been allowed to attain great size. The psychologic situation involved wherein patients to whom medical care is readily available will tolerate these deformities for years, despite assurances that only a minor surgical procedure and minimal morbidity are entailed in cure, merits serious attention. Similar prolonged mental resistance to therapy constitutes a crucial aspect of the problem of cancer and poses an important question for solution in both public health and psychiatry.

Because of their gross and microscopic similarity, the two tumors here reported are considered together. However, as a notably rare entity, the vulvar tumor merits special discussion. Benign neoplasms of the vulva, particularly of mesodermal origin, are much less common than epithelial growths.[2, 3] Of the intralabial growths, many seem to originate from the round ligaments, particularly the cystic variety.[4, 5] According to Brady[4] and Folsome,[6] fibromas of this region are generally sessile, and only about 175 cases have been reported. Approximately 20 per cent of the growths appear ultimately to become sarcomatous.[4] As an index of the infrequency of this type of tumor, Burr[7] reported 1 fibroma occurring in 5,000 gynecologic cases, and Leonard[8] described 6 instances in 23,000 gynecologic admissions to the Johns Hopkins Hospital. Dubrovsky[9] discussed 6 such tumors, 4 angiofibromas and 2 diffuse fibromas of the labia, in 3,000 hospitalized female patients.

Large pedunculated tumors of the vulva akin to the one herein cited are true medical curiosities, search of the literature revealing only the following few published examples. Dubrovsky[9] mentioned a pathologic specimen acquired by the Warren Anatomical Museum of Harvard University in 1891 which had attained the enormous weight of 120 Kg. Taussig[10] recounted as unique the case of Lovelace, with an apron-like tumor weighing 44 pounds (20 Kg.). Geroulanos[11] presented a case of fibromyoma of the vulva weighing 8.5 Kg. Ves Losados'[12] description is of a pedunculated fibroma of the labia majora weighing 1,800 Gm. Bazan[13] and Uchiho[14] briefly mentioned instances of large labial fibrolipomas. De Tarnowsky[15] in a recent report described a pedunculated fibrolipoma reaching halfway down the thigh, weighing 1,270 Gm., as well as 2 large sessile

vulvar tumors. Mosto and Radice,[16] in their survey of primary vulvar tumors, included a pedunculated fibromyxoangioma of the labia majora. De Godoy and Delascio[17] reported a case of giant vulvar papilloma, an epithelial tumor grossly resembling those under discussion but falling clinically into the group of condylomata acuminata.

REPORT OF CASES

CASE 1.—Mrs. P. S., aged 51, of Jewish extraction, a multipara, living with her husband, was first seen April 13, 1942. For the past fifteen years she had had a tumor, gradually increasing in size, growing from the right labium majus. The patient had been in otherwise good health; the menopause had occurred seven years prior to her admission. Except for moderate obesity and great nervousness, no physical findings of relevance were present. Laboratory examinations revealed no data of unusual significance. Under cyclopropane anesthesia, the skin and superficial fascia at the base were incised and the tumor was removed. Recovery was uncomplicated, with primary healing of the wound.

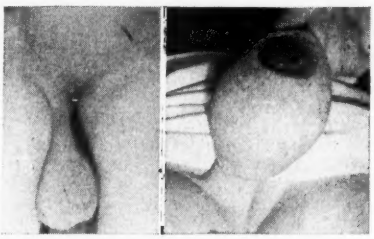

Fig. 1. Pedunculated fibrolipoma of the right labium majus. The photograph on the right shows the superficial ulcer at the apex of the tumor.

The specimen removed was a tumor (fig. 1) hanging down to the knees of the patient, composed of a mass 14 cm. in diameter attached to a pedicle 6 cm. in diameter, with a large superficial ulcer at its lowermost extremity. The mass weighed 2 pounds (0.9 Kg.). On section, it was composed of lobulated adipose tissue with numerous fibrous strands. On microscopic examination, the tumor proved to be a fibrolipoma with adipose tissue in predominance.

CASE 2.—Mrs. L. E., aged 47, of Jewish extraction, a multipara, was seen May 22, 1943. For the past twenty years she had had a slowly growing tumor arising from the upper part of the left arm on its posteromedial aspect near its junction with the axilla. The patient's general health was otherwise good, and physical examination was in all other respects noncontributory.

Fig. 2. Pedunculated fibrolipoma of the axilla.

The laboratory findings were essentially within normal limits. With the area under local anesthesia, the tumor was removed by incising the skin and superficial fascia of the arm. The wound healed by primary intention.

The specimen removed was a large, pedunculated, soft mass covered with skin, with two small superficial ulcerations on one side, weighing 18 ounces (500 Gm.). On cut section, the tumor was found to consist of fatty tissue interspersed with fibrous strands. The microscopic diagnosis was fibrolipoma.

SUMMARY

Two cases of pedunculated fibrolipoma are presented, and the literature on fibromas of the vulva is reviewed.

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SUMARIO

Los autores presentan 2 casos de fibrolipoma muy grande. Uno de los tumores se originaba en la vulva y colgaba hasta las rodillas. El otro fibrolipoma, en el brazo superior, pesó 18 onzas (más que 500 gramos) cuando fué extirpado. Los autores repasan en pocas palabras la literatura de la fibroma de la vulva, tumor extremamente raro.

RÉSUMÉ

Deux cas de volumineaux fibrolipomes pédiculés sont considérés dans ce rapport. Une des tumeurs avait son origine dans la vulve et pendait jusqu'aux genous de la malade. L'autre avait son origine dans la partie supérieure du bras et pesait 18 onces (plus de 500 grammes). La littérature des fibromes de la vulve est étudiée et analysée.

СВОД

Доложено два случая необыкновенно большой стебельковой фибролипомы. Одна опухоль имела вульварное происхождение и висела до колен больной. Вторая опухоль находилась в верхней части плеча и достигла по весу 500 грамов. Дан краткий обзор литературы о фибромах вульвы, которые очень редки.

NEWS AND ANNOUNCEMENTS

UNITED STATES CHAPTER

The **Hudson Valley Guild** of the United States Chapter of the International College of Surgeons will hold a meeting in cooperation with St. Francis Hospital on Monday evening, **October 1.** The County Medical Society will be invited. The meeting is being arranged by Dr. Max Michael Simon of Poughkeepsie, N. Y., president of the Guild, and the committee on arrangements consists of Drs. J. E. McCambridge, J. J. Toomey, R. J. Boyce, H. A. Benson and Clifford A. Crispell. Dr. Albert A. Berg, International President Elect of the College, will be the guest of the Guild and will read a paper on "Ulcerative Colitis." Before the evening meeting, the Guild will entertain Dr. Berg at a dinner. Further information may be obtained from Dr. Simon.

Subtotal Gastric Resection for Peptic Ulcers

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OMAHA, NEB.

IN this last decade much has been said and written about the surgical treatment of the peptic ulcer, but one must not forget that this treatment must be for the complicated ulcer and not for the simple ulcer. I have felt for some time that 80 to 85 per cent of peptic ulcers can be successfully treated under medical management. In some instances, however, the conservative treatment fails, and the ulcer becomes penetrating and adherent to adjacent structures. It is well to realize that in such cases (which should not comprise over 15 to 20 per cent of the total number) surgical intervention must be advised in order to reduce further complications.

Continental European surgeons for several decades have advocated and employed subtotal gastric resection as the treatment of choice for peptic ulcer. In the United States, surgeons have, with few exceptions, been hesitant in adopting this method until late years, but certain recent experiences have contributed toward the acceptance of the procedure. These experiences have revealed that: (1) subtotal gastric resection can be done with a low operative risk, comparable to that of the more conservative operative procedures; (2) unsatisfactory results have been obtained with gastroenterostomy and with various plastic procedures employed about the pylorus for the treatment of peptic ulcer; (3) subtotal gastrectomy is an anatomic and physiologic operation.

There has been a great deal of confusion as to the exact nature of a good gastric resection for the treatment of peptic ulcer. A satisfactory procedure must be on a sound anatomic and physiologic basis. The subtotal gastric resection is based upon the premise that high concentrations of gastric acid tend to cause ulcers to develop, or to persist or recur, and that peptic ulcer does not occur in the presence of complete or persistent achlorhydria. Such achlorhydria can be achieved only by removing two thirds to three fourths of the stomach along with the ulcer and the spastic portion of the duodenum. A properly executed resection must consist of removing: (1) the ulcer, either duodenal or gastric; (2) the vulnerable portion of the duodenum; (3) the spastic pylorus and the antral tissue; and (4) a part of the acid-secreting portion of stomach. When gastrointestinal continuity is restored, an anacidity is produced by allowing regurgitation of alkaline duodenal contents after meals so that the gastric phase of secretion is reduced.

Long years of experience in this country and abroad have revealed nine complications which are widely accepted indications for this surgical procedure: (1) intractable ulcer; (2) ulcer complicated by massive hemorrhage; (3) pyloric obstruction due to a stenosing ulcer; (4) perforation; (5) a gastric lesion which demonstrates lack of ability to heal; (6) a gastric lesion which can-

From the Department of Surgery, Creighton School of Medicine.

not be differentiated from carcinoma; (7) gastrojejunal ulcer; (8) sphincter ulcer; (9) gastrocolic fistula. Some persons cannot be submitted to this surgical procedure, no matter how desirable the operation may be, because of a prohibitive risk of a fatal outcome due to poor physical condition or extreme obesity.

In attempting gastric resections one must bear in mind that the risk of fatality must be low or lower than with the accepted conservative procedures, and that some type of gastrointestinal anastomosis must be done which will permit the gastric emptying phase to be nearly normal.

A patient being prepared for gastric resection must be allowed to restore his high gastric acidity. He is given a high caloric, high protein, high carbohydrate and high vitamin diet. The necessary laboratory studies consist of gastric analysis, complete blood count, urinalysis, typing and matching of blood and blood urea. Should obstruction be present, decompression of the stomach with a Levin tube and constant suction is necessary for several days to a week to relieve the edema of the gastric walls. If the condition of the individual seems weakened, transfusions of blood or plasma and intravenous feedings are given. During this time the patient must be heavily fortified with vitamin K, vitamin B complex and large doses of ascorbic acid.

The day before the operation, the patient is not allowed an evening meal and is permitted to drink only ice water. That evening a thorough cleansing enema is given. The abdomen and the chest are surgically prepared, and gastric lavage is carried out, after introduction through one nostril of two Levin tubes which have been previously prepared as described by Mersheimer.[1] Three grains (0.18 Gm.) of sodium phenobarbital is given hypodermically to insure the patient a good night's rest.

Nothing by mouth is allowed the morning of the operation, and morphine sulfate with atropine sulfate is given one hour before the operation. My associates and I have found cyclopropane and ether to be the anesthetic of

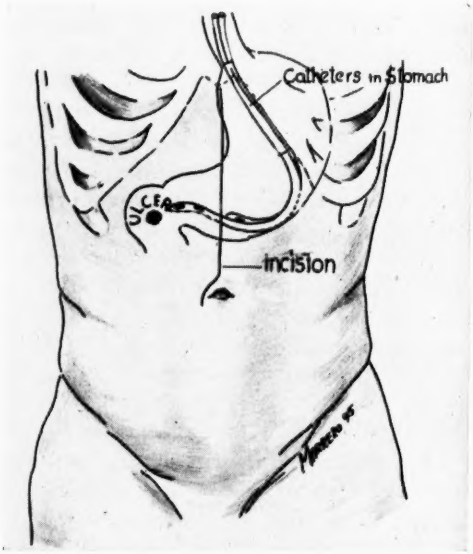

Fig. 1. The stomach and duodenum are exposed by a high midline incision between the rectus muscles, extending from the ensiform cartilage to just below the umbilicus to the right.

choice, although we have used spinal analgesia with good results. Ten per cent dextrose solution in sterile distilled water is allowed to run in slowly by vein during the operation, or a transfusion of blood or plasma may be given if necessary.

It has been our experience that an anterior anastomosis is more satisfactory than a posterior one, as there is less danger of obstruction and the operation is more easily done. It is well to remember that an ulcer can recur at the gastrojejunal anastomosis even after an

adequate resection, and when surgical intervention is necessary, a resection of the resected stomach is easier and safer when the anastomosis has been anterior.

TECHNIC

(Fig. 1) The stomach and duodenum are exposed by a high midline incision between the rectus muscles, extending from the ensiform cartilage to just below the umbilicus on the right. This incision permits an easy exposure of the duodenum and an easy approach to the lesser curvature of the stomach, as high as may be necessary for resection. Exploration of the abdomen is then carried out; the site of the ulcer is visualized and its character and relationship to the surrounding structures determined. It is then decided whether the ulcer can be removed and whether the resection can be done without undue hazard.

If the ulcer can be removed and resection can be carried out, the operation is continued. The wound is protected by covering the edges with square abdominal packs, and a great deal of effort is made to avoid spilling throughout the operation, which will eliminate visceral and abdominal contamination.

Before mobilization of the stomach is begun the relation of the ulcer and the duodenum to the common duct and to the ampulla of Vater must be established, for occasionally we have found a duodenal ulcer so low that it would not permit a safe closure of the duodenum without producing a stricture or obstruction of the common duct or the sphincter of Oddi. (Fig. 2) By mobilizing the free lateral border of the duodenum, dividing the peritoneum in its upper border and rotating the duodenum medially, its relation to the gastrohepatic omentum can be easily recognized. An incision is then made through the peritoneal fold covering the common duct, exposing it and permitting recognition of the relation of the common duct and the ampulla of Vater to the ulcer. Then one can readily say whether the ulcer can be removed and sufficient duodenum be left for safe closure.

The site of anastomosis is then located and mobilization of the stomach is begun, which must be in the proximal third

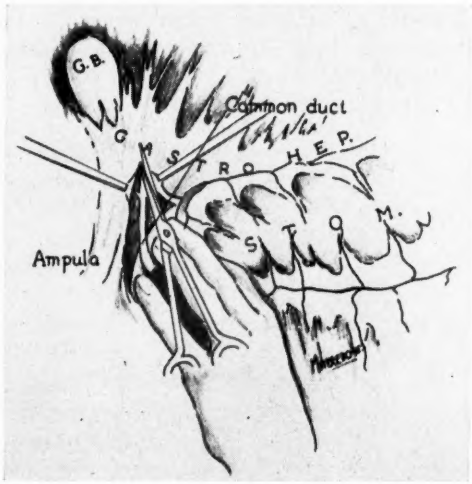

Fig. 2.-The free lateral border of the duodenum is mobilized by a division of the peritoneum in its upper border, and by rotation of the duodenum medially the common duct is exposed.

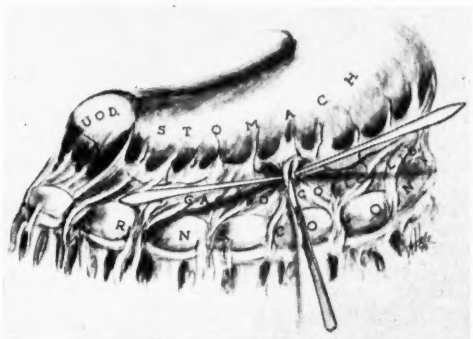

Fig. 3. The border of the stomach along the greater curvature is elevated, and the lesser omental cavity is opened by division of the gastrocolic omentum.

of the stomach. (Fig. 3) The border of the stomach along the greater curvature in that area is elevated, and the lesser omental cavity is opened by division of the gastrocolic omentum. (Fig. 4) The right index finger is passed through the rent of the gastrocolic omentum and carried posterior to the stomach up through the gastrohepatic omentum.

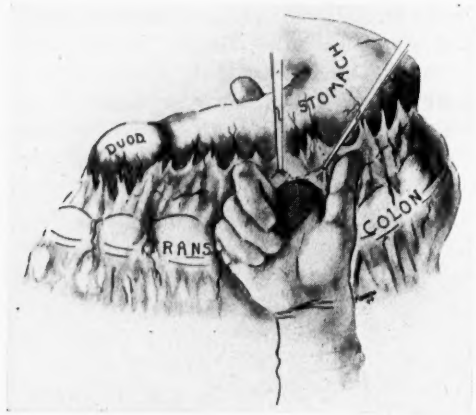

Fig. 4. The right index finger is passed through the rent of the gastrocolic omentum and carried posterior to the stomach up through the gastrohepatic omentum.

Fig. 5. A sponge is drawn through posterior to the stomach, and the two free ends are grasped together with a forceps.

(Fig. 5) A sponge is drawn through posterior to the stomach, and the two free ends are grasped together with a forceps to provide a means of elevation or traction to the stomach. (Fig. 6) Mobilization of the greater curvature is continued to the left. (Fig. 7) The stomach is pulled down, and the left gastric artery is doubly tied at a high level along the lesser curvature with a suture of cotton. The resection level is established, and the borders of the greater and lesser curvature are cleansed of omental tissue in order to permit a clean approximation of the gastrojejunal walls.

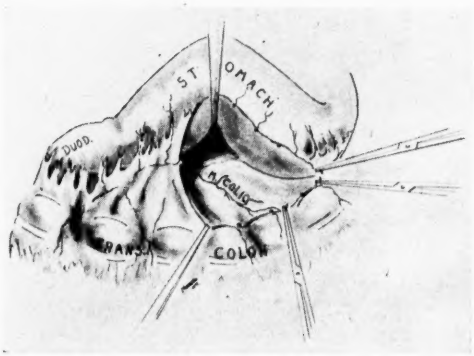

Fig. 6. Mobilization of the greater curvature is continued to the left.

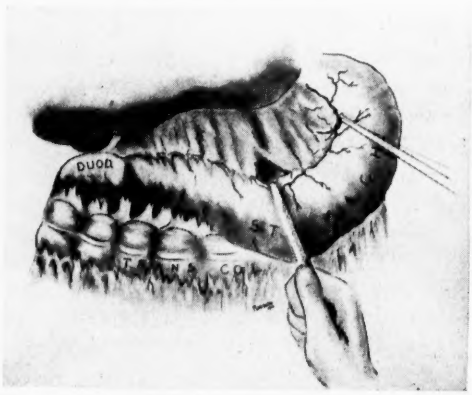

Fig. 7. The stomach is pulled down, and the left gastric artery is doubly tied.

(Fig. 8) The part of the jejunum which is to form the anastomosis is searched for and brought anterior to the colon.

The Levin tubes are located in the stomach and pushed upward toward the cardia. (Fig. 9) The site of the anastomosis is definitely established, light intestinal clamps are applied at right angles to the stomach at the site of the anastomosis and the stomach is then transected. (Fig. 10) The cut ends of the stomach are swabbed with Novak's solution, and the distal end of the stomach is covered with an abdominal pack and turned to the right. (Fig. 11) The proximal stump of the stomach is lifted up, and the upper half of the stoma is closed by a running locked suture of No. 0 chromic catgut and then reinforced by a Lembert running suture of No. 0 chromic catgut, and again reinforced by a Lembert running suture of cotton. (Fig. 12) The gastrojejunal anastomosis is then com-

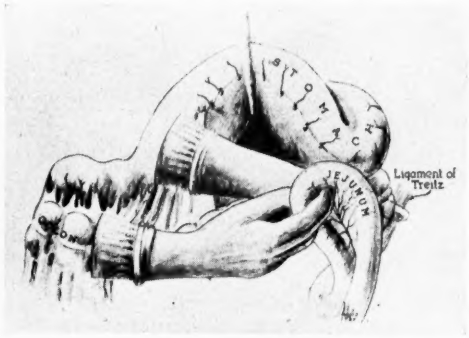

Fig. 8. The part of the jejunum which is used to form the anastomosis is searched for and brought anterior to the colon.

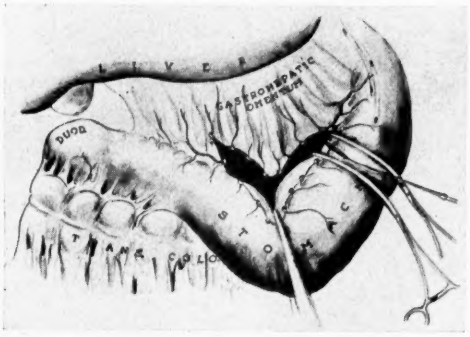

Fig. 9. Light intestinal clamps are applied at right angles to the stomach at the site of the anastomosis, and the stomach is transected.

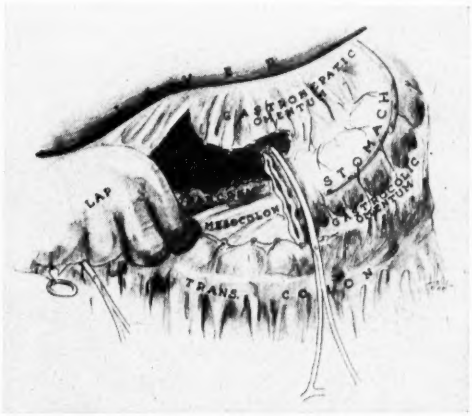

Fig. 10. The cut ends of the stomach are swabbed with Novak's solution, and the distal end of the stomach is covered with an abdominal pack and turned to the right.

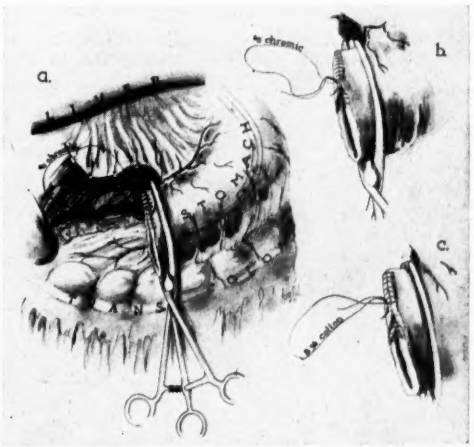

Fig. 11. The upper half of the stoma of the proximal stump of the stomach is closed by a running locked suture of No. 0 chromic catgut, then reinforced by a Lembert running suture of No. 0 chromic catgut and again reinforced by a Lembert running suture of cotton.

pleted as follows: A loop of jejunum is brought anterior to the transverse colon, and an anastomosis is made about 15 to 20 cm. from the ligament of Treitz by attaching the distal jejunal loop to the greater curvature of the stomach just posterior to the open stoma, with a continuous suture, of cotton, and attaching the proximal loop to the lesser curvature of the stomach. (Fig. 13) The jejunum is then incised longitudinally and opened, and a dry sponge is inserted into the lumen and the contents swabbed out to prevent spilling. The light clamp is removed from the stomach, and a dry sponge is likewise inserted into the stoma and the contents swabbed out. The sponges are removed from the two stomas, and a second posterior suture of No. 0 chromic catgut is begun at the greater curvature of the stomach and carried through all layers of jejunum and gastric walls as an interlocking

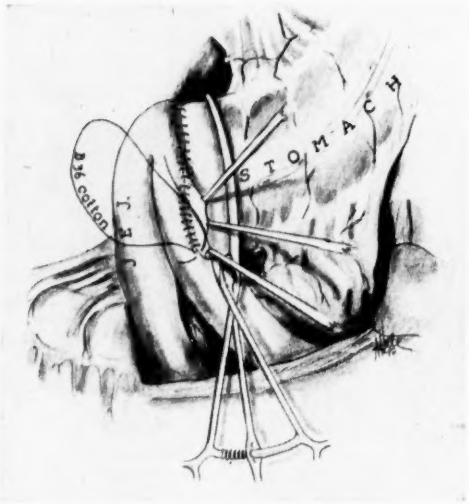

Fig. 12. The jejunal loop is brought anterior to the transverse colon and is attached posterior to the open stoma of the stomach.

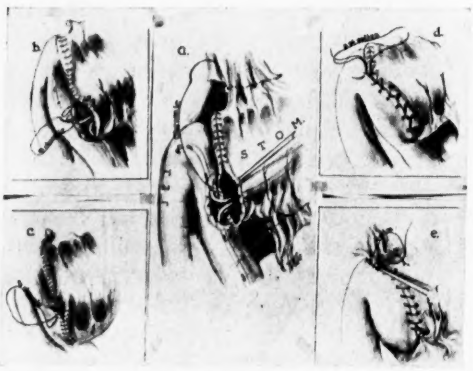

Fig. 13. The jejunum is incised; Levin tubes are passed into the distal and proximal portions of the jejunum, and the gastrojejunal anastomosis is completed.

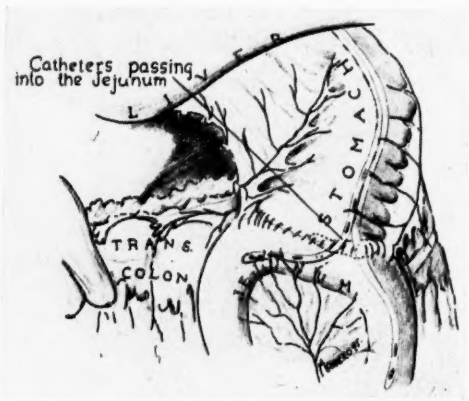

Fig. 14. The gastrojejunal anastomosis is completed.

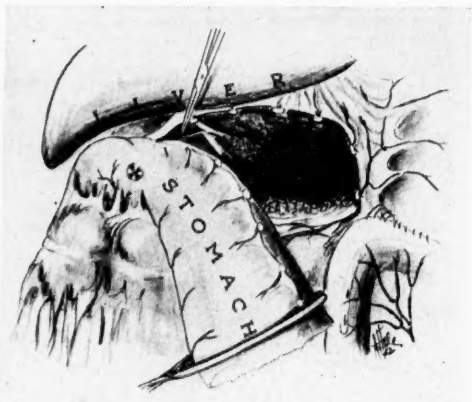

Fig. 15. The stomach is pulled down, and the right gastric artery is doubly ligated.

stitch. Before the anastomosis is completed the Levin tubes are located in the stomach, brought out and swabbed with Novak's solution. The multiple perforated Levin tube is placed in the proximal end of the jejunum to be used for suction of duodenal, jejunal and gastric contents. The less perforated tube is placed in the distal jejunal loop and is used for jejunal feeding and if necessary for drainage of the jejunal contents. The posterior interlocking suture is continued anteriorly left to right as Connell stitch inverting the

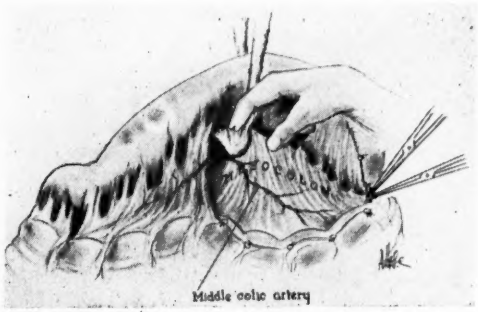

Fig. 16. The gastric stump is pulled upward and is mobilized by pushing back the fused mesocolon containing the middle colic artery.

jejunal and gastric edges securely and closing the orifice completely. The anterior suture line is again reinforced by a Lembert running suture of No. 0 chromic catgut from right to left, attaching the jejunal loop beyond the stoma over the closed inverted end of the transected stomach, and this is again reinforced by a running suture of cotton. The gastrojejunal angles are reinforced by suturing the divided gastrocolic omentum and gastrohepatic omentum with cotton, care being taken that no angulation of the jejunum occurs. (Fig. 14) This completes the gastrojejunal anastomosis.

(Fig. 15) The abdominal pack covering the distal gastric stump is removed, the stomach is pulled down, the right gastric artery is doubly ligated with a suture of cotton close to the duodenum and the gastrohepatic omentum is cut. (Fig. 16) The gastric stump is then pulled upward, and the antral region is mobilized by pushing the fused mesocolon containing the middle colic artery

Fig. 17. The gastric stump is raised and the gastrocolic omentum is ligated to the right; the duodenal adhesions are divided away from the pancreas.

back gently with gauze, without hemorrhage or injury to the artery. (Fig. 17) The stump is raised, and the gastrocolic omentum is ligated and tied down to the duodenum with cotton; if adhesions are present one can easily divide them as far as the attachment of the pancreas and the duodenum under direct vision without injury to the pancreas. (Fig. 18) Two light clamps are applied at the pyloric end of the stomach, and the distal stump is removed. (Fig. 19) The clamp holding the pyloric end of the duodenum is removed. The edges of the pyloric stoma are grasped with an Allis forceps, the stoma is opened, the contents are aspirated and the area is swabbed with Novak's solution. The

pylorus and duodenum are cut longitudinally to just beyond the ulcer and then transversely, with removal of the portion of the duodenum containing the ulcer along with the pylorus. (Fig. 20) The edges of the duodenal stoma are grasped with an Allis forceps, and the duodenum is lifted up so that no contents are spilled. The duodenum is closed by a continuous locking suture of No. 0 chromic catgut and inverted by continuous Lembert suture of No. 0 chromic catgut and again reinforced by a continuous Lembert stitch of cotton. (Fig. 21) The duodenal closure is further reinforced by suturing the capsule of the pancreas with a continuous stitch of cotton over the duodenal closure, and this is reinforced by suturing the divided ends of the gastrocolic and gastrohepatic omentum over it. If the ulcer has penetrated the posterior portion of the duodenum and is closely adherent to the head of the pancreas, no effort is made to remove the ulcer, for its base consists of pancreas and scar tissue, and to attempt removal would result in severe hemorrhage, which would be difficult to

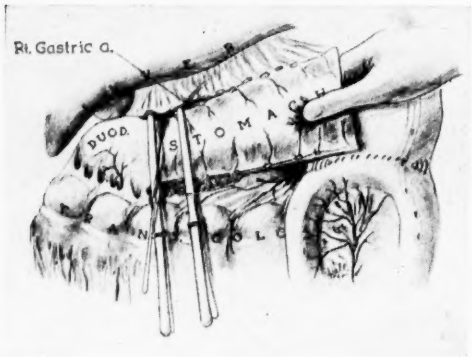

Fig. 18. The pyloric end of the stomach is clamped, and the distal gastric stump is removed.

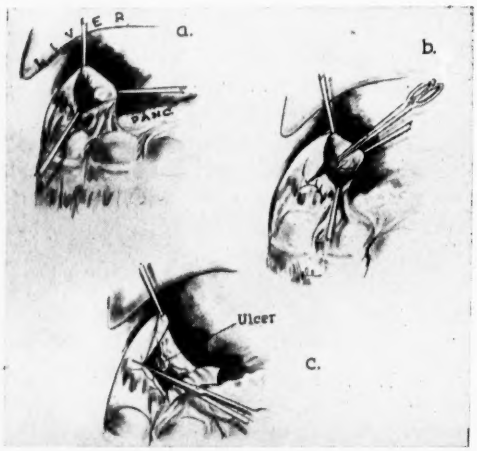

Fig. 19. The pyloric stoma is grasped with an Allis forceps; the pylorus and duodenum are cut longitudinally to just beyond the ulcer and then transversely, the portion of the duodenum containing the ulcer being removed along with the pylorus.

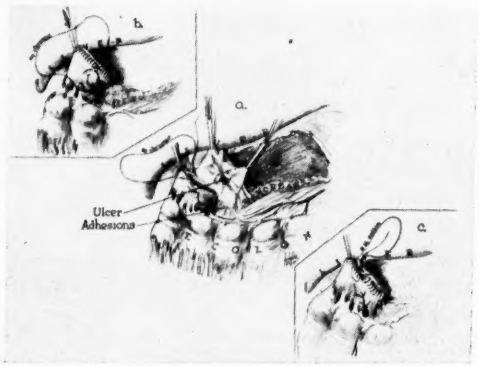

Fig. 20. The duodenum is closed.

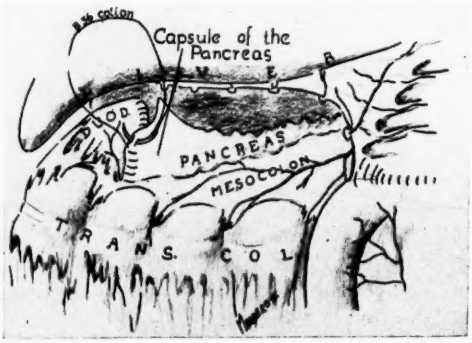

Fig. 21. The duodenal closure is reinforced by suturing the capsule of the pancreas over it.

control. Therefore, by lifting the rim of the duodenum away from the ulcer and leaving the base intact, the duodenal stoma can be safely closed without undue risk. If the ulcer is closely adherent to the common duct or to the ampulla of Vater, the ulcer and that part of the duodenum cannot successfully be removed without the closure's causing occlusion of the common duct or the ampulla of Vater. In this instance the ulcer is left intact and the duodenal opening is closed as previously described. This procedure has been followed in several cases with good results. (Fig. 22) This completes the gastric resection. All abdominal sponges and packs are accounted for, and the abdominal cavity is inspected for all bleeding points and if necessary ligated with a suture of cotton. Then 2.5 Gm. of sulfanilamide and 2.5 Gm. of sulfathiazole are sprinkled over the region of the gastrojejunal anastomosis and over the duodenal closure. The peritoneum and the rectus sheath are closed with a figure eight interrupted suture of cotton. The wound is washed out with ether and 2.5 Gm. of sulfanilamide is sprinkled over the wound, and the edges of skin are approximated with a continuous lock stitch of cotton.

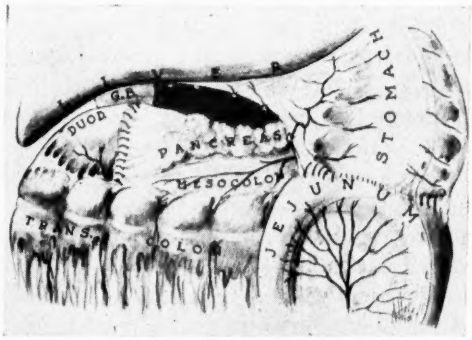

Fig. 22. This completes the gastric resection.

POSTOPERATIVE CARE

To increase hyperventilation and to prevent immediate surgical shock, an ampule of solution of nikethamide (coramine; 25 per cent solution of pyridine betacarboxylic acid diethylamide) or of pentamethylenetetrazol (metrazol) is given before the patient leaves the operating room, another ampule is given on his arrival in his own room, and 1 ampule is given every fifteen minutes thereafter until three more doses have been given. Gastric suction is immediately begun, and a transfusion of whole blood is given intravenously. To insure patency of the Levin tube and to prevent occlusion of the lumen by mucus or by gastric contents, 10 cc. of isotonic solution of sodium chloride is instilled through each tube every hour for several days. Opiates are given for the relief of pain when necessary, and deep breathing exercises as well as frequent changes of position are prescribed. Dextrose solution (10 per cent in 1,000 cc. of sterile distilled water) is given intravenously every twelve hours for four or five days. A transfusion of blood or of plasma may be given on the second or third postoperative day for the prevention of hypoproteinemia. Ascorbic acid, 1 Gm., and vitamin B complex, 1 ampule, are given once daily for four or five days for rapid healing. Vitamin K, 1 ampule every twelve hours for four or five days, is given for the prevention of bleeding. Feeding of water by mouth is started immediately in 1 teaspoonful doses, and the amount is increased until 3 ounces is given every half-hour. The patient is urged to chew gum frequently. Jejunal feedings may be started on the second or third day. Ten cubic centimeters of 10 per cent solution of sodium thiosulfate is given intravenously, starting on the third postoperative day, once daily for four or

five doses, for the prevention of thrombosis, phlebitis and pulmonary embolism. The Levin tubes are removed on the fifth postoperative day, and feedings by mouth are begun at that time and increased in amount until a normal diet is taken by the third week. No tobacco, alcohol or coffee is allowed for an indefinite period, and multivitamins are to be taken before each meal. The patient is allowed to sit up in bed on the second day and in a chair by the fifth day; he is permitted to be up and about on the sixth day and is urged to keep active until he is able to return to work, which may be from five to six weeks.

The complications encountered during convalescence, with no deaths, were: massive pulmonary collapse, 3 cases; ruptured duodenal stump, 1; subdiaphragmatic abscess, 1; obstruction of the proximal jejunal loop, 1; abscess of the wound, 5. My associates and I have had 1 death from toxic hepatitis in a series of 60 resections of the stomach for duodenal, gastric and jejunal ulcers with the modified procedure (a mortality of 1.7 per cent). The results have been highly satisfactory, and reexamination of the patients every three months has not revealed any recurrence of ulcer at the gastrojejunal stoma to date.

SUMMARY AND CONCLUSIONS

Surgical treatment is used for complicated, not for simple, peptic ulcer.

Subtotal gastric resection is the treatment of choice for the complicated peptic ulcer.

The indications for the surgical procedure have been: (1) intractable ulcers; (2) ulcers complicated by massive hemorrhage; (3) pyloric obstruction due to stenosing ulcers; (4) perforations; (5) gastric lesions which demonstrated lack of ability to heal; (6) gastric lesions which could not be differentiated from carcinoma; (7) gastrojejunal ulcers; (8) sphincter ulcers; (9) gastrocolic fistula.

The preoperative treatment has consisted of: (1) allowing the patient to restore his high gastric acidity; (2) completing all necessary laboratory studies; (3) decompression of the stomach for several days to a week, if obstruction was present; (4) administration of blood transfusion, blood plasma and intravenous feedings, if the condition of the individual seemed weakened; (5) administration of large doses of vitamin K, vitamin B complex and ascorbic acid.

The technic for the gastric resection which has been adopted and carried out has been the Hofmeister modification of the Polya method, using the anterior open anastomosis.

Postoperative treatment as carried out has consisted of: (1) blood transfusions and administration of 10 per cent dextrose in sterile distilled water intravenously; (2) continuous gastric and duodenal drainage with a Levine tube, for four to five days; (3) large doses of vitamin K, vitamin B complex and ascorbic acid; (4) jejunal feedings starting on the second postoperative day; (5) administration of opiates for pain; (6) feedings by mouth starting on the fifth postoperative day; (7) having the patient up and about on the sixth postoperative day.

Subtotal gastric resection can be done with as low a mortality rate as the accepted conservative procedures.

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1. Mersheimer, W. L.: A Double Tube Method for Drainage and Feeding Following Gastric Resection or Gastroenterostomy, Surgery *12*:563, 1942.

RESÚMEN

El tratamiento quirúrgico no está indicado en las úlceras pépticas simples pero si en las complicadas.

La gastrectomía subtotal es el método operatorio de elección.

Las indicaciones para el tratamiento quirúrgico han sido: (1) ulceras intratables; (2) ulceras complicadas con hemorragias masivas; (3) obstruccion pilórica debida a úlceras estenosantes; (4) perforaciones; (5) lesiones gástricas que demuestran incapacidad de curar; (6) lesiones gástricas que no pueden ser diferenciadas del carcinoma; (7) ulceras gastroyeyunales; (8) ulceras esfinterianas; (9) fístula gastrocólica.

El tratamiento preoperatorio ha consistido en: (1) permitir que el enfermo restaurare su alta acidez gástrica; (2) completar todos los estudios de laboratorio necesarios; (3) usar, en presencia de obstrucción, la descompresión gástrica durante algunos días o una semana; (4) hacer transfusiones de sangre o plasma y recurrir a la alimentación por vía endovenosa en caso de que el enfermo se muestre debilitado; (5) administrar grandes dosis de vitamina K, complejo vitamínico B y ácido ascórbico.

La técnica elegida y llevada acabo para ésta resección gástrica ha sido la modificación de Hofmeister al método de Polya, usando la anastomosis abierta anterior.

El tratamiento postoperatorio instaurado fué el siguiente: (1) transfusiones de sangre y administración intravenosa de una solución de dextrosa al 10 por ciento en agua destilada y esterilizada; (2) drenaje gástrico y duodenal continuo con tubo de Levine durante cuatro o cinco días; (3) grandes dosis de vitamina K, complejo vitamínico B y ácido ascórbico; (4) alimentación yeyunal al segundo día postoperatorio; (5) administración de opiáceos contra el dolor; (6) comenzar la alimentación por la via oral al quinto día postoperatorio; (7) levantar al enfermo aproximadamente a los seis dias de la operación.

La resección gástrica subtotal puede llevarse a cabo con un índice de mortalidad tan bajo como en los procedimientos conservadores aceptados.

RÉSUMÉ

Le traitement chirurgical est employé dans les cas d'ulcère peptique compliqué, et non dans les cas d'ulcère simple. L'opération de choix est la résection sous-totale gastrique.

Les indications sont les suivantes: *(a)* les cas que le traitement médical ne controle pas; *(b)* les ulcères compliquées d'hémorrhagie massive; *(c)* les obstructions pyloriques dues aux ulcères sténosants; *(d)* les lésions gastriques qui ne montrent aucune tendance de gûerir; *(e)* les lésions gastriques difficiles à différencier du carcinome; *(f)* les ulcères gastro-jéjunaux; *(g)* les ulcères siegeants aux sphincters; *(h)* les fistules gastro-coliques.

Le traitement pré-operatoire doit être: *(a)* permettre au malade de restaurer une haute acidité gastrique; *(b)* achever les études nécessaires de laboratoire; *(c)* décomprimer l'estomac pour plusieurs jours ou une semaine si il y a des signes d'obstruction; *(d)* transfusion du sang ou du plasma et alimentation intraveineuse si le malade parait affaibli; *(e)* doses massives de vitamine K, de vitamine B complexe et d'acide ascorbique.

La technique de resection gastrique que l'auteur a adoptée est la methode de Polya modifiée par Hofmeister, employant l'anastomose antérieure.

Le traitemente post-operatoire employé par l'auteur est: (1) transfusion et administration intraveineuse d'une solution de 10 pour cent de dextrose dans l'eau distillée et sterilisée; (2) drainage continuel de l'estomac et du

duodénum avec le tube Levine pour quatre ou cinq jours; (3) fortes doses de vitamine K, de vitamine B complexe et d'acide ascorbique; (4) alimentation jéjunale après le deuxième jour post-opératoire; (5) opiacées pour la douleur; (6) alimentation par la bouche après le cinquième jour post-opératoire; (7) permettre au malade de se lever après le cinquième jour post-opératoire.

La résection sous-totale gastrique donne une mortalité pas plus élevée que celle des procédures conservatives généralement pratiquées.

СВОД

Хирургическое лечение применяется для осложненной, а не простой желудочной язвы.

Предпочитается субтотальная желудочная резекция.

Найдены были следующие показания на хирургическое вмешательство:

(1) Язвы не подающиеся лечению; (2) язвы, осложненные массивным кровоизлиянием; (3) обструкция pylorus'a стенозными язвами; (4) перфорация; (5) желудочные поражения неизлечимость которых была показана; (6) желудочные поражения, которые нельзя отличить от рака; (7) желудочно-тонкокишечные язвы; (8) язвы свинктера; (9) желудочно-большекишечной свищ.

Предоперационная подготовка: (1) больному дана возможность востановить его высокую желудочную кислотность; (2) завершение всех необходимых лабораторных изысканий; (3) если существует обструкция, то применяется дэкомпрессия желудка, продолжающаяся от нескольких дней до недели; (4) если больной очень ослаблен применяется переливание крови и плазмы и внутривенозное питание; (5) даются большие дозы витаминов К, В комплекс и С.

Принятой и выполненной техника желудочной резекции явилась Hofmeister модификация методики Polya, пользующейся передним открытым анастомозом.

Послеоперационный режим: (1) переливание крови и внутривенозное вливание 10% дэктрозы в стерильной дистиллированной воде; (2) непрестанный в течении четырех или пяти дней желудочный и дуоденальный дренаж при помощи трубки Левина; (3) большие дозы витаминов К, В комплекс и С; (4) тонкокишечное питание со второго послеоперационного дня; (5) препараты опия для болей; (6) питание через рот с пятого послеоперационного дня; (7) разрешение подняться с кровати на шестой послеоперационный день.

Субтотальная желудочная резекция может быть произведена с тем же процентом смертности, как и при общепринятых консервативных способах.

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Torsion of the Gallbladder Associated With Acute Appendicitis

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CASES of torsion of the gallbladder are extremely rare. We are reporting this case for several reasons: first, only about 80 cases have been reported, and the majority of these were recorded in foreign journals; second, we have been unable to find any mention of the condition in textbooks; third, our patient was the oldest one reported who was operated on and lived; fourth, our patient had also an acutely inflamed appendix, which was removed at the same time as the gallbladder.

A review of the literature revealed that torsion of the gallbladder was first reported by Wendel [1] in 1898. Further search revealed that the condition has a rather definite clinical pattern and that diagnosis should be considered a possibility in certain instances.

By far the largest portion of the patients reported on have been women, and the great majority of them were women over the age of 50. In fact, a good number of them were women over 70. So when a woman over 70 who has previously been well suddenly is taken ill with acute pain located in the upper part of the abdomen, possibly followed by some degree of shock, associated with nausea and vomiting but not with jaundice, when the previous history is not pertinent and when examination reveals tenderness of the right side, more severe in the upper right abdominal quadrant, with suspicion of, or a definite, tender mass in the upper right abdominal quadrant, the possibility of torsion of the gallbladder should be thought of.

No review of the anatomic variations resulting in a predisposition to torsion will be given. The reader is referred to "Ptosis and Torsion of the Gallbladder" by Meeker and Lisenby.[31] These authors present a complete and comprehensive survey of the subject with excellent illustrations. In their opinion the actuating cause is a hyperperistalsis of the colon, but there is no experimental or clinical proof to substantiate this belief.

The literature reveals that there have been only 2 cases of torsion associated with rupture of the gallbladder, although the duration of illness in some cases has extended up to six and eight days.

The youngest patient with this condition reported was that of Blank,[46] a 17 year old youth, who was also one of the patients reported to have perforation.

The oldest patient previously reported was that of Murray.[33] He was an 83 year old man who survived the operation but died six weeks later of retention of urine and edema of the lungs.

Our patient was also 83 years of age, a woman who is alive and well at the time of writing, two months after the operation.

REPORT OF CASE

Mrs. J. B., an 83 year old white woman, was in good health until she was taken ill suddenly, immediately after noon lunch, with abdominal pain associated with vomiting. At first the pain was severe and more or less generalized, though more intense on the right side. The lunch was emesed. The vomitus consisted mostly of rather clear fluid, which seemed to contain bile. The pain remained constant, but was of lesser severity. It persisted until the time of operation. (The patient was first seen by one of us [C.W.H.] the day following the onset of the attack.)

Examination revealed a well developed, undernourished-looking elderly woman, lying in bed and not appearing acutely ill. The examination of the head, eyes, ears, nose, throat, heart and lungs revealed no abnormalities except a medium-sized nodular goiter. This was producing moderate pressure symptoms.

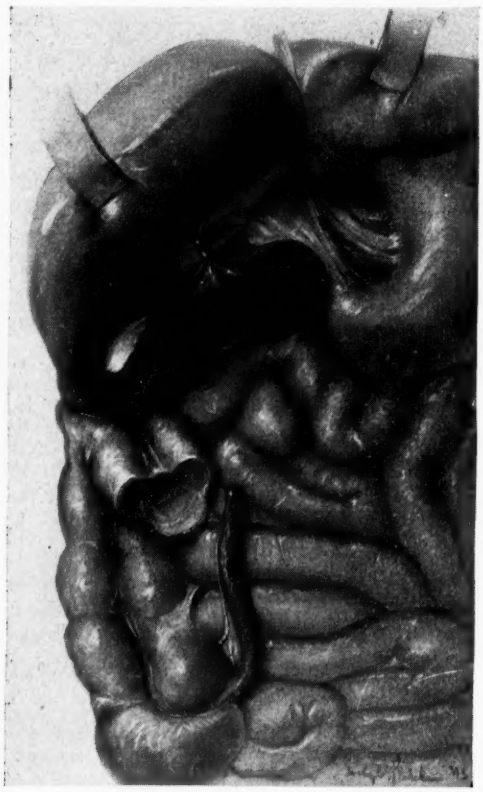
Abdominal examination revealed generalized tenderness across the upper portion and the entire right side. The tenderness was greater in the right lower quadrant, but the right upper quadrant was more rigid. There was dullness in the right upper quadrant; the remainder of the abdomen was normally tympanitic. The liver, kidneys and spleen were not palpable. Active peristalsis was present.

Vaginal and rectal examinations revealed nothing significant.

The patient's temperature was 99.4 F., her pulse rate 80, her respiratory rate 28, and her blood pressure 140/70.

The patient had been in fairly good health previously except for some pressure symptoms due to her adenomatous thyroid. She had been subject all her life to occasional mild attacks of indigestion, characterized by gaseous distention and belching. These attacks had no relation to food. She had never had an attack similar to the present one. She had not had any tarry or clay-colored stools, diarrhea or constipation. She had had an attack of painless jaundice of unknown cause fifty years before the present attack, but had never had gallbladder colic or appendicitis.

She had four children living and well. Her husband had died thirty-three years before (cause unknown). She had had her menstrual onset at the age of 14 years; the periods were regular, occurring at intervals of twenty-eight days and lasting five days.



Drawing showing the gallbladder in relation to other organs.

The menopause occurred when she was 53. There had been no subsequent bleeding.

At operation (performed with the patient under spinal anesthesia induced with 120 mg. of procaine hydrochloride), via a transrectus incision, the appendix was found to be acutely inflamed. It was removed by the clamp and purse string method. Further exploration revealed a gangrenous organ in the upper part of the abdomen. On first glance this appeared to be a gangrenous loop of small bowel, but closer inspection revealed it to be

a gangrenous gallbladder which was twisted from left to right two and one-half times on its pedicle.

The gangrenous area extended all the way down to the common duct.

A routine cholecystectomy was done, and a small portion of the gangrenous cystic duct was left, into which a soft rubber tube was sutured to drain the common duct.

Recovery was uneventful except that there was fairly severe abdominal distention. The pathologic report rendered by Dr. Lawrence Berman was "recurrent acute appendicitis and gangrenous gallbladder."

The report of this case adds to a growing list of recorded cases of torsion of the gallbladder and should aid in the establishment of a preoperative diagnosis.

SUMMARY

A case of torsion of the gallbladder is reported. The condition is a rarity, and the case in question is unusual because the patient had an associated acute appendicitis. Further, the patient is the oldest one reported on with this condition who survived the operation more than six weeks. The available literature has been reviewed, and a comprehensive bibliography is appended. Special mention is given to a study of the condition by Meeker and Lisenby.[31] If an elderly woman, previously well, suddenly becomes ill with acute abdominal pain, nausea and vomiting, possibly with consequent shock, and if examination shows tenderness of the right side and evidence of a tender mass in the right upper quadrant of the abdomen, the diagnosis of torsion of the gallbladder should be considered.

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RESÚMEN

Se hace relación de un caso de torción de la vesicula biliar, condición rarisima, y este caso es de especial interés, por que existía una apendicitis aguda asociada.

Además, este paciente es el de edad más avanzada de que se hace relación y que ha sobrevivido la operación más de seis semanas.

La literatura obtenible sobre este tema ha sido revisada y una bibliografía comprensible aquí se anexa. Mención especial se hace a los estudios de esta condición por Meeker y Lisenby. Si una mujer de edad con buenos antecedentes de salud se enferma violentamente con dolores abdominales agudos, nausea y vomitos y aún signos de choque y si el examen físico demuestra sensibilidad en el lado derecho del abdomen y en el cuadrante superior derecho y tumefacción localizada, el diagnóstica de torción de la vesicula biliar merece tomarse en consideración.

RÉSUMÉ

Un cas de torsion de la vésicule biliaire est rapporté. Cette condition est une rareté. Dans le notre cas, il y avait aussi une appendicite aigue. Notre malade survit plus de six semaines. La littérature du sujet est analysée, et une bibliographie compréhensive accompagne l'article. Mention spéciale est faite de l'étude de cette condition faite par Meeker et Lisenby. Si une femme agée en bonne santé soudainement devient malade, ressentant une douleur aigue abdominale, accompagnée de nausée, de vomissement, parfois accompagnée de choc, et présentant une masse douloureuse dans le quadrant droit supérieur de l'abdomen, le diagnostic de torsion de la vésicule biliaire doit être considéré.

СВОД

Доложен случай скручивания желчного пузыря. Это случается редко, и данный случай оказался необыкновенным, потому что он был осложнен острым апендецитом. Также, этот больной является самым старым в литературе, кто жил более шести недель после операции. Рассмотрена литература и дана библиография. Особенно упомянуто изучение этой болезни Meeker'ом и Lisenby[2]. Если до того здоровая пожилая женщина вдруг заболевает и развивает острую брюшную боль, тошноту и рвоты, и даже, возможно, шок, и, если исследование показывает болезненность с правой стороны и болезненную массу в правом верхнем квадранте живота, то нужно допустить возможность скручивания желчного пузыря.

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Role of the Second Toe in Bunionectomies

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LATERAL deviation of the first toe is a predominant feature in every hallux valgus. Beyond 15 degrees, any deviation may be considered anomalous. This outward flexion of the big toe may even reach 90 degrees by the digit's overlapping or underlying its neighboring second toe.

Whatever operative procedure is adopted for the correction of the displaced hallux in the course of a bunionectomy, there is always need for restoration of the toe to a relatively normal alignment with the rest of the digits, especially with the second toe. This restored alignment of the hallux will soon be disturbed if the second toe is so malformed that it invites the first to a recurrence of the deviation. The malformation of the second toe may be in the fashion of a hammer in the distal or the proximal phalangeal joint or in both. It may be a hyperextension of the toe in its metatarsophalangeal joint. Or the toe may be hammered and dorsally contracted as well. Whatever malposition of the second toe prevails, it always leaves a space for the first toe to fill by lateral bending in its metatarsophalangeal or its phalangeal joints. This interdigital space must be obliterated in order to prevent a recurrence of valgus of the first toe.

The filling of this empty space requires operative correction of the malformed second toe. If the latter is flexed in one or in both phalangeal joints, a wedge-shaped resection of the one or both articulations and a single or double arthrodesis are indicated and should be performed. If the second toe is hyperextended or is dorsally dislocated so that its proximal phalanx rests upon the head of the second metatarsal bone, a respective operation must be performed on the extensor tendon, on the dorsal capsule of the joint or on the head of the proximal phalanx or head of the metatarsal bone. The object should always be to align the second toe so that it will serve as a splinting agent for the corrected hallux valgus.

The operations on the second toe are chosen according to the indications inherent in the existing malformation. The extension or hyperextension must be overcome through section or elongation of the extensor tendon. With a mild contracture of the tendon, a mere section of it may suffice to align the toe. With more severe contractures, a tendon elongation is advisable. After the tenosection, one must be able to flex the toe plantarly about 10 degrees. Now a plantar splint of narrow spring steel should be applied and the straightened toe held in mild flexion about four to six weeks. During this time the severed tendon will be reunited and sufficiently elongated. Passive flexion of all toes, including the one operated on, should be continued, in order to obviate a recurrence of tendon contractures.

Should the toe resist plantar flexion after severance of the tendon, a dorsal capsulotomy of the metatarsophalangeal joint must be done and toe flexion attempted. Should both of these sec-

tions, tendon and capsule, fail to align the toe, a bone operation is necessary. It may be in the form of a resection of the proximal head of the phalanx or of the head of the second metatarsal. It is preferable to remove the phalangeal head, leaving the weight-bearing metatarsal head intact. However, this may be a matter of the surgeon's judgment in each individual case.

If bone resection has been considered at the outset of the operation, the tendon may be left unimpaired; its elongation is not called for, since there is a shorter distance to bridge after a bone operation has been performed.

Whatever operation has been done for the alignment of the second toe, the digit must be splinted in a slightly flexed position. The splint should be kept in position until tendon and capsule have reunited. If the splinting is omitted, as it frequently is, the fibrous tissue of the reunion eventually contracts, and a recurrence of the original deformity, in a graver form, ensues. Even if one chooses to insert a Kirschner wire after a resection of the phalangeal joint, the splint is still essential, because its purpose is to hold the toe corrected while the severed and elongated soft tissues are reuniting.

The details of the operations for hallux valgus and for the deformities of the second toe are here omitted, since the surgical procedures vary according to indications.

CONCLUSION

It is essential to correct the second toe if it is so deformed that it offers an interdigital space for the first toe to fill after the hallux valgus has been surgically overcome. It should be so aligned with the first toe that it serves it as a splint after the operation.

SUMARIO

Es necesario corregir el segundo dedo del pie si está tan deformado que ofrece un espacio interdigital al primer dedo para llenar despues de la corrección quirúrgical del hallux valgus.

El segundo dedo debe estar alineado con el primero para servir de tablilla después de la operación.

Las operaciónes del segundo dedo son de selección según, o de acuerdo con, las indicaciónes inherentes a la malformación que existe.

RÉSUMÉ

Après correction chirurgicale de l'hallux valgus, il est essentiel de remettre en place le second orteil s'il est déplacé ou deformé ou s'il crée un espace interdigitale permettant le déplacement du premier orteil. Le second orteil sera aligné avec le premier orteil de façon à former une éclisse après l'opération. On choisira l'opération indiquée par la malformation existante.

СВОД

Очень важно исправить второй палец ноги, если после хирургического исправления hallux valgus найдено, что второй палец так деформирован, что большой палец занимает его место. Второй палец должен быть уравнен с большим пальцем так, чтобы после операции он служил в роли шины. Хирургическое вмешательство над вторым пальцем решается на основании показаний заключающихся в существующей деформации.

Medical and Surgical Services (Military and Civil) in the Dominican Republic*

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IN THE Dominican Republic, thanks to the sedulous endeavors of His Excellency the President of the Republic, Generalissimo Dr. Rafael Leonidas Trujillo Molina, a transformation has been wrought in the field of public health and in the system of hospitals, both in affairs military and in affairs civil.

MILITARY SERVICES

The Medical Corps of the National Army has set up proper standards both for times of peace and for times of war to ensure the maintenance of the health and well-being of our troops. In our army we arrange to have a systematic examination made along general clinical lines of each and every one of our soldiers, including such procedures as a thoracic check-up and investigation of the blood groups for transfusion purposes, each soldier having in his identification book the record pertaining to the blood group to which he belongs. In addition to this, we practice vaccination against smallpox and against typhoid and serologic reaction for syphilis.

In keeping with the system of organization established for our armed forces, we have hospitals and dispensaries distributed throughout the country, properly fitted out. As a base hospital we have the Professor Marion Military Hospital, a personal endowment by His Excellency the President of the Republic, equipped in the most up-to-date manner with modern hospital appurtenances. It has a 200-bed capacity with the following services: Surgery, Orthopedics, Urology, Internal Medicine, X-Ray, Ophthalmology, Otorhinolaryngology, Odontology, Clinical and Biological Laboratory, Transfusion Department, Cardiology, etc., each one of these services being in the care of a specialized medical officer.

I must report furthermore that within the past two and a half years the following surgical work has been done:

Operations of skull	359
Operations of thorax	12
Operations of abdomen	634
Genito-urinary operations	250
Operations of the extremities	39
Proctologic operations	22

We have a system of transportation that enables us to offer our soldiers a rapid transfer to the best prepared medico-surgical centers in urgent cases.

As a hospital subsidiary we have the Military Hospital of the Northern Department, located in the city of Santiago de los Caballeros, with the same features as mentioned in the foregoing, although the bed capacity is smaller.

We also have other smaller-sized hospitals and dispensaries in the different provinces and sections, all looked after by medical officers, the endowment in each case being commensurate with the

* Presented at the Fourth International Assembly of the International College of Surgeons, New York, June, 1943.

number of soldiers and the civil population.

We maintain a strict supervision of venereal diseases, and of syphilis in particular, by means of periodic inspections and prophylactic and curative measures. We thus attach to these diseases the importance they really have in the efficiency of the troops.

The Medical Corps of the Army renders wholehearted coöperation to the civil health authorities, in the maintenance of proper standards in regions smitten by tropical endemias. Furthermore the army in the far-off or out-of-the-way regions is in charge of the campaign carried on among the civil population for anti-typhoid and anti-diphtheria vaccination, etc.

CIVIL SERVICES

The care of the health of the civil population is in the keeping of the State Department of Health and Beneficence.

This department has divided the republic into sixteen sanitary districts; at the head of each there is a doctor upon whom devolves the task of enforcement of the law and of the provisions of the Sanitary Code, and upon whom furthermore it is incumbent to take the necessary measures in case of any epidemics or other serious emergencies.

This department arranges a campaign every year for vaccination and for the control as far as possible of endemic outbreaks peculiar to the tropical zone.

As to hospitalization, the department has seventeen hospitals, many of them specialized, such as the Ramfis Children's Hospital, with 125 beds; the Dr. Martos Sanatorium, with 200 beds; Nuestra Señora de las Mercedes (Our Lady of Mercy) Leper Hospital, with 120 beds, and then the Padre Billini Hospital, a general hospital of vital importance, with a capacity of 225 beds, located in Ciudad Trujillo, performing the office of Central Hospital. In San Pedro de Macorís the San Antonio Hospital, with the same capacity as the previous one, renders medico-surgical service to the eastern region of the country. For the southern region we have the Juan Pablo Pina Hospital, at the present time with a 100-bed capacity. In the northern region we have the San Rafael Hospital, with an 80-bed capacity.

The Dominican Red Cross has a splendid organization. It maintains a school for nurses and in connection with present war activities it has prepared first-aid courses.

The foregoing is a summarized statement of what we have available and it is a source of gratification for me to report that the state of health of my country is excellent and to add at this juncture that the Dominican Republic is not stinting in the contribution that it is making to the cause of the Democracies.

SUMMARY

A summary of military and surgical services of the Dominican Republic is presented. One base hospital, the Professor Marion Military Hospital, is equipped with complete surgical and allied laboratory services under specialized medical officers. The Military Hospital of the Northern Department, of fewer beds, and several smaller hospitals and dispensaries make readily available to the armed forces of the Republic the best of medical care. An excellent system of transportation to surgical centers, strict supervision of venereal diseases and close coöperation with civil services render the military and medical service effective. A State Department of Health and Beneficence, subdivided into sixteen sanitary districts with seventeen hospitals, many specialized, plus the efficient Dominican Red Cross, correlate to produce an excellent civil medical program.

SUMARIO

Un resumen o sumario de los servicios militares y quirurgicos de la República Dominicana es presentado. Un hospital basal, "El Profesor Marion Hospital Militar," está equipado completamente para el servicio de cirugía y de laboratorios accesorios bajo la dirección de especialistas médico-militares.

El Hospital Militar del Departamento del Norte, con menos camas, y varios otros más pequeños hospitales y dispensarios suplen ampliamente todas las necesidades del major servicio médico a las fuerzas armadas de la república.

Existe un excelente servicio de transporte a los centros de cirugía y muy estricta supervigilancia contra las enfermedades venereas, e intima cooperación con los servicios médico-civiles asegura un resultado eficáz y eficiente.

El Departamento de Salud y de Beneficiencia de Estado, subdividido en dieciseis distritos de sanidad, con diecisiete hospitales, varios de ellos especiales, más aún la eficiente Cruz Roja Dominicana, contribuyen a un excelente programa médico-civil.

RÉSUMÉ

L'auteur nous décrit les services médico-chirurgicaux de la République Dominicaine. Le principal hôpital, le Professor Marion Military Hospital, a un service de laboratoires militaires et chirurgicaux complet. Ce service est sous la direction de spécialistes. L'hôpital militaire du département du nord a moins de lits. D'autres hôpitaux et dispensaires complètent et assurent aux forces armées de la Republique un traitement adéquat et scientifique. Il existe en outre un excellent système de transportation desservant les centres chirurgicaux. Il y a une stricte supervision des maladies vénériennes. On note une coopération très serrée des services médicaux civiles et militaires. Cette coopération permet d'obtenir des résultats heureux. Le Département de la Santé et de la Bienfaisance de l'Etat est divisé en seize districts sanitaires renfermant dix-sept hôpitaux dont plusieurs sont spécialisés. Une excellente Croix Rouge Dominicaine contribue à l'efficacité du corps médical.

СВОД

Здесь дан краткий обзор военно-хирургических функций Доминиканской Республики. Одна лазаретная база, Военный Госпиталь имени Профессора Мариона, оборудована полным хирургическим и соответственным лабораторным составом, находящимся под руководством военных медицинских специалистов. Немного меньший Военный Госпиталь Северного Департамента, а также несколько небольших госпиталей и амбулаторий снабжают военные силы республики самой лучшей медицинской помощью. Великолепная система транспортации к хирургическим центрам, строгое наблюдение над венерическими болезнями и тесное сотрудничество гражданских медицинских центров очень содействуют полной успешности военно-хирургическо-медицинских служб. Государственный Департамент Здоровья и Помощи, имеющий семнадцать больниц, из которых многие специализированы, и очень хорошая организация Доминиканского Красного Креста способствуют осуществлению великолепной гражданской здравоохранительной программы.

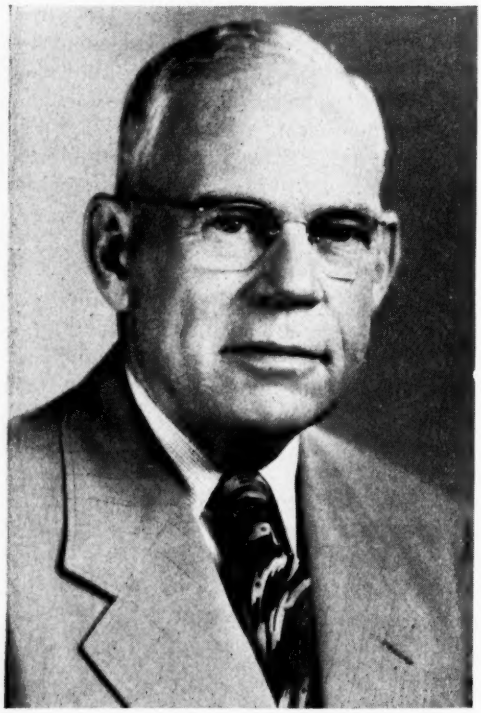
IN MEMORIAM

HENRY HOUSTON OGILVIE, F.A.C.S., F.I.C.S.

Henry H. Ogilvie was born in 1885 in Melissa, Texas. He attended Baylor University and received his medical training at the University of Texas, in 1910. His internship was served at Santa Rosa Hospital, San Antonio, Texas.

In World War I Dr. Ogilvie served as a captain in the Medical Corps at Base Hospital 79, AEF. During the present war he was cited by the Office of Civilian Defense in Washington for his service while chairman of the local emergency hospital corps in San Antonio, Texas.

He was a co-founder of the Medical and Surgical Memorial Hospital, San Antonio, Texas, and later served on the staffs of several hospitals in San Antonio.



Henry H. Ogilvie (1885–1944)

Dr. Ogilvie's society affiliations include membership in the Bexar County Medical Society, the Texas State Medical Association, the American Medical Association, the International Postgraduate Medical Assembly of Southwest Texas, the American College of Surgeons and the International College of Surgeons. In 1932 he was the winner of the Case Records Award of the American College of Surgeons. He became a Fellow of the International College of Surgeons in 1941. In 1943 he was made Regent of District 16, and at the Ninth Annual Assembly of the United States Chapter, in October 1944, he was elected Third Vice-President of the Chapter, in which capacity he served the College loyally.

Dr. Ogilvie was known as a surgeon of high ideals and of great technical skill and thoroughness. It was with sorrow that we learned of his death, on June 15, 1944, at the age of 60, in New Orleans.

MARTIN I. GREEN, M.D., F.A.C.S., F.I.C.S.

Dr. Martin I. Green, of San Francisco, Calif., died on June 30, 1945, after an illness of a few months.

Dr. Green was born in 1899 in Cleveland, Ohio. He received the degree of Doctor of Medicine in 1921 from the College of Physicians and Surgeons, San Francisco. After postgraduate work in ophthalmology in European Universities, he received training in cataract surgery in India. In 1928 he became associated with his uncles, Dr. Louis D.

(Continued on page 367)

Editorials

Cancer of the Uterus

Its Prevention and Treatment

MANY problems have been made to seem complicated by a wrong analysis.

If all the gynecologic conditions should be placed together, their gravity and tragedy would not equal those of malignant tumors, and the malignant tumors of the uterus take first rank in their challenge to the medical profession for better thinking and action.

Today's treatment of cancer of the uterus reminds one of the Reverend Conwell's "Acres of Diamonds" in the back yard. Surgeons chase the stars for the ultimate remedy, when there is an almost infallible means of prevention in 95 per cent of cases.

There is no location of malignant growth, in male or female, where cause and effect are so apparent as in the cervix uteri, abuse of which is frequently followed by cancer. The truth of this is not denied by any experienced gynecologist who is free to express an opinion. Further, there is no other location where a predisposing cause of malignant growth can be prevented so uniformly.

If the foregoing statements are correct, why has the medical profession been so derelict in prophylactic teaching in regard to cancer of the uterus. Compare the volumes of literature on the treatment of this condition which fill medical journals with the amount on its prevention.

Is it possible that teaching positions of members of our profession have a tendency to cramp or intimidate their endorsement of well known facts of life-saving importance? Must teachers stay in the column of accepted thoughts when better advice is within their reach? If we are to deal in *fashion* of thought or action, let us practice it on some lesion which Christian Science will cure.

It is impossible for me to reconcile my views stablized by forty-five years in gynecology with today's teaching concerning cancer of the uterus. I have made the statement in literature elsewhere that the greatest therapeutic anachronism I know is that seen in the endorsed views of the medical profession on dealing with the cancerous uterus.

Why do I make such a statement? It is my experience that in 95 per cent of the cases cancer of the cervix uteri has followed injury or some pathologic abuse of the cervix. This percentage is too high to be dismissed as a coincidence and should stamp out some of the lethargy of indifference in views concerning the abused cervix and its relation to malignant growth.

In regard to the percentages of malignant tumors of the uterus in different sites, no two physicians are likely to have the same experience; hence it is best to report as nearly as possible one's own experience.

I have found the cervix to be first in

frequency of involvement, the fundus second and the region of the internal os third. In regard to fatal location, I place the region of the internal os first, the cervix next and the fundus last. Determinations of fatality depend on several factors. On account of its accessible location, cancer of the cervix is more early diagnosed than a malignant growth near the internal os. Further, a malignant growth near the internal os is in a location rich in absorbents, lymphatics and blood vessels, and metastasis takes place earlier than with cervical or fundal cancer. Malignant growths of the fundus appear ten years later (an element of favor), and the fundus of the uterus is less rich in lymphatic absorbents.

Cancer of the cervix can in practically all cases be prevented by surgical or other treatment. Dr. B. Z. Cashman, of Pittsburgh, Pa., has reported that of 10,000 patients who had been treated for a cervical lesion by cautery, cancer developed later in only 2.

In sixty-five years' experience in the Joseph Price Hospital, Philadelphia, Pa., neither the late Joseph Price nor I have observed the development of a malignant neoplasm following any of our repairs of the cervix. What more forceful message could there be in regard to the prevention of this large percentage of malignant lesions of the cervix.

The remedy of repair of the offending cervix has practically no mortality and is not only prophylactic against uterine cancer but a therapeutic remedy of broad application.

If it is possible to prevent cancer of the cervix, which constitutes the majority (in my experience 95 per cent) of uterine cancer, one need be concerned only with the small number of cases in which the malignant growth involves the fundus or the supercervical portion of the uterus.

I am at a loss to know just why repair of the cervix today is a lost art. It is an operation of great importance and far reaching in its blessings to the patient with a precancerous lesion. I would suggest to surgeons that they discard all kinds of absorbable suture material in the repair of the servix.

I have discussed and illustrated all these points in a monograph.

Uterine cancer, furthermore, can be most uniformly recognized at the stage of involvement when extirpation of the organ will give more brilliant results than are experienced in any other location.

There is no other location in the human body where cancer so often involves a useless organ. Again, there is no major operation in all surgery which is followed by such a splendid postoperative history as total extirpation of the uterus, nor is there one which has so low a death rate. These factors have priceless values to the surgical profession. Why have the members of that profession so uniformly rejected them?

It is impossible to discuss the treatment of uterine cancer without reviewing the relative values as they affect prevention, diagnosis, pathology and treatment. In fighting a Kansas prairie fire, one first determines which way the wind blows. In about 95 per cent of cases of uterine cancer the wind blows from the cervix, and there must begin the back fire of prevention.

For a surgeon to say that he would not do a curettage biopsy of the uterus if he were at all suspicious of the presence of malignant growth in the fundus would be to condemn himself as unscientific and certainly unfashionable.

I have discussed at length in other publications the percentage of failures

of biopsy for either cervical or fundal cancer and the possible dangers of biopsy. I have called attention to the fact that if the proportion of such failures in diagnosis is greater than 1 per cent or a fraction thereof, one is not justified in making such investigations, as the sterile uterus can be removed in a vaginal hysterectomy with a mortality of 1 per cent or less and is followed by a brilliant postoperative history. I never treat uterine cancer (confined to the organ) but always remove the organ.

I feel that surgeons have not given sufficient attention to the frailties and uncertainties of means of diagnosis as compared with the value of the organ involved and the price (mortality and morbidity) of its removal. One would be infinitely more generous as to the possible errors of any means of diagnosis in dealing with a valuable organ or one with a high mortality involved in its removal than one would be in the case of a useless organ, such as the sterile uterus, removal of which is followed by almost no mortality.

The members of the surgical profession have ignored these precepts, the verity of which cannot be refuted, and this has taken from them the strongest post on which successful treatment of uterine cancer leans. Such cancer in many cases is merciful in its patience with tardy recognition and treatment; it has been my experience that extension and metastasis come only after prolonged neglect in a good percentage of cases.

In this paper I am not discussing extrauterine malignant growths. If surgeons exercised their surgical privileges, extrauterine cancer would be robbed of 90-odd per cent of its terrors, as extension of the malignant growth to abdominal lymph nodes is in an overwhelming percentage of cases due to poor surgical teaching and action; the patient does consult the physician.

It has been my experience in a life's work that if general prophylactic and preventive measures are exercised, plus early exercise of the surgeon's therapeutic privileges, and if the errors in diagnosis are not many times in excess of the value of the sterile uterus, one should have living at the end of ten years 96 to 97 per cent of patients instead of 15 or 20 per cent.

During the past generation, the almost total abandonment of surgical treatment of the cancerous uterus is the most flagrant example of a therapeutic anachronism of which I have any knowledge; the teaching has been a distressing and reprehensible example of following false gods. The ultrascientific means of investigating the pathologic uterus have placed unworthy values on this indwelling organ where malignant tumor cells are too often lurking.

It should be remembered, without questioning the value of the excellent laboratories manned by some of the best men in the medical profession, that superlative degrees of dependence should not be placed on ultrarefinements in histopathologic technic, and that this is especially so when one is dealing with a sterile organ which can be removed with such matchless results.

In my attempts to call attention to the uncertainty of biopsy, I have been accused of being a laboratory nihilist. This is untrue in every sense. I have not condemned biopsy per se in the recognition of malignant growths of the uterus, but I have weighed the value of the sterile organ against possible errors in any means of diagnosis and have discussed the same under the head of "relative values."

As I have before stated, biopsy would

have to give correct results in 99 per cent of cases to compete with the prophylactic effect of complete extirpation of the organ. The surgeon had better remove 50 sterile uteri than to permit 1 cancerous organ to go unrecognized.

In the removal of several thousand uteri, my associates and I have asked each patient a number of times, as she returns for follow up examinations, whether she ever regretted the removal of the uterus; with pleasing emphasis, the answer has been "no" in every case.

My summation of the problem of cancer of the uterus is as follows:

A great majority (in my experience 95 per cent) of the malignant growths of the uterus involve the cervix, and practically all such tumors can be prevented by proper treatment. Therefore, such prophylactic work robs the lesion of most of its fangs.

In practically all cases of cancer of the uterus the organ is sterile, and an overwhelming percentage of the patients have borne children and lend themselves to easy and timely vaginal hysterectomy.

There is no male or female organ of useless function which is so often involved by cancer as is the sterile uterus and which can be removed with such brilliant results. If the penalty (mortality and morbidity) of hysterectomy were high and the uterus a fertile organ or one of useful function, then the penalty of uncertain methods of diagnosis could be condoned with charitable views toward late treatment followed by dire results. This is just another statement of relative values. It is my opinion, derived from experience, that 95 to 97 per cent of the present mortality from cancer of the uterus is due to human errors. It is poor sportsmanship to attribute any considerable percentage of the deaths to the patients' neglect.

Throughout a life of gynecologic experience, I can recall only about a dozen women who died of cancer of the uterus who had not consulted a physician months or years before but had had no treatment advised.

The surgeon who has not had actual experience with the clamp method of vaginal hysterectomy is in no position to criticize hysterectomy as the treatment of uterine cancer. There is no fair comparison between the ligature and the clamp method of removing the uterus, as far as ablation of periuterine structures is concerned. The slough incident to the crush of the clamp plus the slough incident to the unsutured circular incision in the vaginal fornix involved in the operation are factors of the greatest importance in dealing with the cancerous uterus.

Sixty-five years ago the late Joseph Price told the medical profession that repair of the cervix prevented later development of malignant tumors of the uterus and that early vaginal hysterectomy by the clamp method, preceded by cauterization, was the means of preventing malignant growth.

Is it possible that all these years we have been fiddling while Rome burned?

JAMES W. KENNEDY, MD., F.A.C.S.

A "Student Dollar"

WE are in an age of conflict between nationalistic and internationalistic ideas and ideals, especially in political and economic fields. The evils caused by exaggerated and perverted nationalism have been recognized, and everywhere there are signs of efforts to bring about cooperation between countries and to create systems of international relations based on a realization of the interdependence of different parts of the world. The desires of national and other groups for supremacy and advantage of their own are still strong, however, and political and economic pressure groups are still active.

The members of the surgical profession in the United States of America must demonstrate by thought and action that we do not foster nor represent what our South American neighbors rightly speak of as American class consciousness. The medical profession in the United States has never been guilty of discrimination in service rendered as far as race or creed goes. Therefore we are in an excellent position to cultivate friendship and scientific intercourse not only with our South American neighbors but with the world at large.

The arts and sciences, perhaps because they are not so closely linked with man's desires for physical and financial security, have always shown internationalism. Medicine, in all its branches, is so universally important that it transcends national boundaries. Except during the artificial conditions produced by war, and even then to some extent, discoveries that advance the art of healing have been shared with physicians all over the world. Seldom has any consideration of monetary gain motivated such exchange of experience.

As has been pointed out in recent issues of the *Journal,* the need for international cooperation among surgeons and other scientists will be especially important in the next few years because of the great tasks of reconstruction and education that lie ahead of us. Moreover, the countries which are now in more fortunate circumstances must share their educational and research facilities with students from other countries, in order to increase as soon as possible the number of trained workers available. This sentiment is expressed constantly by other groups and in other periodicals.

In these cooperative scientific efforts, however, there are financial difficulties, arising from the differences in economic status and standards of different nations and from the complications of international monetary exchange. Some of these differences are of long standing; others have been created by the wartime conditions of recent years.

In some countries which have been severely ravaged by war, supplies of books and scientific equipment are almost exhausted, and it is difficult for either individual students or institutions to purchase the needed replacements, especially since foreign textbooks that are needed frequently cost much more than the average books printed in these countries. In other countries, even though conditions are more nearly normal, the cost of imported textbooks is almost prohibitive. A recent article in *Science* * points out that in South

* Dunham, George C.: Role of Tropical Medicine in International Relations, Science *102*:105 (Aug. 3) 1945.

America "French text-books are generally used, largely because the United States text-books are too expensive. The tuition at a number of the schools is only about thirty dollars a year. Text-books that sell for five dollars in this country [the United States] sell for ten or twelve in the southern republics. . . . Text-books can not now be obtained from Europe, and those available were published before 1939."

Young men and women who wish to study in other countries frequently find themselves seriously handicapped either by actual lack of funds or by the fact that their money is worth less than it was at home, because of the rate of exchange or because of a difference in cost of tuition, books and the necessities of living.

Universities and medical schools and research institutions can help to solve these problems to some extent through scholarships. Internationally minded individuals, like the members of the International College of Surgeons, can help by opening the doors of their hospitals and sharing their skill with young people from other countries. Individuals and groups can help to supply textbooks as gifts or at cost.

Since the problem is a universal one, however, and one which will eventually affect the welfare of all peoples of the world, would it not be a good idea for the governments of the countries that are in a position to cooperate in this way to create a "student dollar" or perhaps, better, a "student rate of exchange," which would enable qualified students from other countries to secure more purchasing power for their money? This would in no way need to interfere with plans of individual countries for financial aid to their own young men and women whose education has been interrupted by military service. On the contrary, it would probably tend to broaden and enrich the education of these young people, through giving them greater contacts and creating an international sharing of experiences.

Could not members of the International College of Surgeons and other interested persons endeavor to influence their governments to make some provision for such a "student dollar?"

Roland Klemme, M.D.,
F.A.C.S., F.I.C.S.

NEW BOOKS

Rafferty's Artificial Pneumothorax in Pulmonary Tuberculosis [1] shows much thought and study. The volume is divided into three parts: (1) "General Considerations"; (2) "Selection of Cases," and (3) "Management." The basic concepts of the management of early tuberculosis are described and a plea made for universal standardization of rules and technic in the administration of pneumothorax. Since collapse therapy within the past decade has largely revolutionized the treatment of tuberculosis, a knowledge of all phases of collapse therapy is essential, and this the author has properly emphasized. Both ambulatory and sanatorium types of pneumothorax are discussed and evaluated. Supplementing Dr. Rafferty's own extensive observation of institutional and private cases is a bibliography of 195 references.

The book is particularly timely because it is anticipated that a marked increase in the incidence of tuberculosis will follow the war. The reviewer heartily concurs in the widespread movement of carrying some form of ambulatory collapse therapy to patients in remotely located rural areas. Rural physicians with some basic training and a working knowledge of pneumothorax apparatus and technic can do an inestimable amount of good and curative therapy for patients with early tuberculosis where sanatorium facilities are not available.

A valuable addition would be a chapter showing two or more accepted and simple types of apparatus, with a thorough discussion of indication, contraindication and technic of administration, to be used as a guide by the rural physician as well as by the beginner in collapse therapy.

The author is to be congratulated on his thorough study and erudite presentation of artificial pneumothorax.

The authors and publisher of the companion volumes **Fertility in Men** and **Fertility in Women** [2] are to be congratulated on having produced a most commendable presentation of the subject of human fertility. Sponsored by the **National Committee of Maternal Health,** these volumes may be said to represent the best and most advanced thought of the day on the reciprocal problems of sterility and fertility.

In both volumes emphasis is rightfully placed on the bisexual character of fertilization, a fact which seems to have been unrecognized in medical literature and practice until recent years. The volumes are freely illustrated, easily readable and well documented.

In Fertility in Men the semen and its sperm content constitute the major interest, which is natural. There is also a useful section on the many commercial hormonal products with their confusing multiplicity of trade names. It is of interest to note that the author of this volume (Hotchkiss) confirms the general authoritative opinion that there is no effective hormonal treatment for advanced degeneration of spermatic tissue; that definite improvement can be expected in a few cases; that the responses are variable and cannot be predicted from case to case; that there is no single hormone which can be regarded as a "reliable specific" for spermatogenesis.

The clinician who wishes to be prepared for the treatment of impaired fertility will do well to make himself thoroughly familiar with these volumes.

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[1] Artificial Pneumothorax. T. N. Rafferty. Grune & Stratton, New York, 1944. Price $4.00.

[2] Fertility in Men: A Clinical Study of the Causes, Diagnosis and Treatment of Impaired Fertility in Men. Robert Sherman Hotchkiss. With a Foreword by Nicholson J. Eastman, Chairman, Editorial Committee, National Committee of Maternal Health. J. B. Lippincott Co., Philadelphia, 1944. Price $3.50. Fertility in Women: Causes, Diagnosis and Treatment of Impaired Fertility. Samuel L. Siegler. J. B. Lippincott Co., Philadelphia, 1944. Price $4.50.

The love of Jews for the practice of medicine is traditional, and their considerable accomplishments in this field have been pointed out by many medical historians. **Harry Fridenwald** is an authority on medical history and medical bibliography, and his recent book, **The Jews and Medicine,**[3] is an outstanding contribution to the history of medicine in general and to the history of Hebrew medicine in particular.

The book covers thoroughly the history of Jewish physicians, as well as the contributions of the Jews to medical science. Thirty-eight of the forty-two essays were previously published by the author during the past thirty years in various medicohistorical journals and Jewish periodicals; some of these have been considerably revised and enlarged.

Various topics touched upon include: the practice of the healing art among the Jews; the relationship of Jews and of Judaism to medicine; the role of Jewish physicians in the early universities; biographic sketches of prominent medieval Jewish physicians; history of some Jewish physicians of Spain, Portugal, Italy and France; Jewish physicians of the sixteenth century; the ethics and practice of medicine from the Jewish point of view, and other subjects of historical interest.

The book is provided with an introduction by Dr. Henry E. Sigerist and a comprehensive bibliography. It is a welcome addition to historical literature.

The English edition (1944) of **Spiegel and Sommer's Neurology of the Eye, Ear, Nose and Throat**[4] is a reference work which should find its way to the shelves of everybody whose interests extend beyond the minimum of therapeutic knowledge. The authors have enlarged upon their German treatise of 1931; not only have they brought it up to date, but it is completely rewritten so as to cover the subject comprehensively. Neurology is generally considered a complex subject, and little time is given to its study in selecting graduate instruction. This book may help to overcome an old aversion. The borderlines between ophthalmology, otolaryngology and neurology are discussed scientifically and practically. Eye, ear, nose and throat are described anatomically, physiologically and pathologically insofar as they relate to the central and peripheral nervous system. An extensive bibliography, consisting of over 1,700 references to the international literature, makes this a valued addition to the diagnostic and therapeutic armamentarium of the practitioner in the field and the research man in the laboratory.

Louis Sigler's extremely useful text **The Electrocardiogram**[5] will prove a delight to both student and practitioner. The volume of 391 pages is well written, and its simplicity of discussion and the excellence of the 203 plates which illustrate the text make it an unusual instrument of learning in electrocardiography. The author has stated his conclusions concisely and clearly. He has avoided including the moot questions which are still a part of the present phase of electrocardiography, but he has not dismissed them entirely without consideration, as may be seen by the inclusive bibliography which follows every chapter. The plates containing pictures of tracings are made up of composites of many graphs and are well explained by legends. The problem of multiple fourth leads is discussed in the last chapter, but this topic is presented only through a statistical study made by the author, and does not leave the reader with any actual concept of the procedure; the field of multiple precordial leads is still in its experimental stage, and the recent literature must be consulted on the points of issue. The unipolar limb leads are merely mentioned in passing; here too recent literature must be consulted to acquaint oneself with the progression

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[3] The Jews and Medicine. Essays by Harry Friedenwald. The Johns Hopkins Press, Baltimore, 1944. Price $7.50.

[4] Neurology of the Eye, Ear, Nose and Throat. E. Spiegel and I. Sommer. Grune & Stratton, New York, 1944. Price $7.50.

[5] The Electrocardiogram. Louis H. Sigler. Grune & Stratton, New York, 1944. Price $7.50.

of experimental work. Considering the text as a whole, it is a definite contribution to medical science and will serve to simplify the study of electrocardiography for those who avail themselves of it.

We are happy to greet a concise and informative volume, written by an experienced industrial ophthalmologist, which deals with industrial compensation as applied to ophthalmology, setting forth the duties and obligations of industry to the employee, as well as definite information, advice and instructions to the physician interested in these problems. This is **Kuhn's Industrial Ophthalmology.**[6]

Visual job analysis and testing technics aid the ophthalmologist in placing the right employee in the right job. Proper installation of safety measures and educational campaigns for managers and employees supplement the work of the ophthalmologist.

The chapter on "Industrial Eye Injuries Caused by Solid Bodies," written by Dr. Snell, presents thoroughly though briefly the importance, care and treatment of these types of injuries. Programs for prevention of ocular accidents and various medicolegal considerations are clearly presented. Recent developments in industrial ophthalmic problems arising from welding, radiation, illumination, general physical health of employees and the advantages of employment of the blind are thoroughly covered.

The appendix contains a glossary of toxic hazards to the eyes, a program applicable to industry for the eyes of employees and a significant study of "Appraisal of Loss of Visual Efficiency."

Comprehensive bibliographic references will induce the reader to do further extensive study. A thorough index aids one to select quickly the varied material of this worth while book.

Miriam Bredow's Handbook for the Medical Secretary,[7] a handy reference guide for secretaries already employed and for students who plan to be technicians or medical stenographers, fills a long-felt need. The personality of the stenographer and such aspects of office routine as handling of appointments, patients, patients' records, accounts and correspondence, as well as a discussion of office procedures participated in by the stenographer, are capably treated. An introduction to the doctor's activities, medical, medicolegal and literary, with a chapter on the preparation of manuscripts, rounds out the work. Perhaps the most valuable chapter is that on medical terminology, divided for convenience according to the medical specialties. The book is recommended as a valuable addition to the office library of any physician or surgeon.

Physicians are no exception to the axiomatic statement that no one is immune to lawsuits. The number of physicians sued for malpractice in the last twenty years has constantly increased. The opportunities open to a disgruntled patient to bring action against a physician are practically unlimited, and for this reason it is of vital importance that he be acquainted with the laws of various states.

Louis J. Regan's book on **Medical Malpractice** [8] covers every phase of the subject. Each section consists of a brief discussion of the problems plus extracts from the decisions in malpractice suits. In addition, it sets forth some of the varying or contrary decisions in regard to particular points of law.

Chapter I defines "malpractice." The physician's failure to meet standards of practice in his community are pointed out. In chapter V the author differentiates between profit and nonprofit organizations as to their respective liability for malpractice. It is brought out in chapter VI, on the "Expert Witness," that a general practitioner may be qualified to

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[6] Industrial Ophthalmology. Hedwig S. Kuhn. C. V. Mosby Co., St. Louis, 1944.
[7] Handbook for the Medical Secretary. Miriam Bredow. McGraw-Hill Book Co., Inc., New York, 1943.
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testify in certain cases, even if he has never been specially trained in the subject under consideration. Chapter XV, dealing with the surgeon, enumerates twenty-five various conditions for which malpractice may be claimed.

This book is timely. It is well illustrated with case reports. A copy should be in the library of every practicing physician.

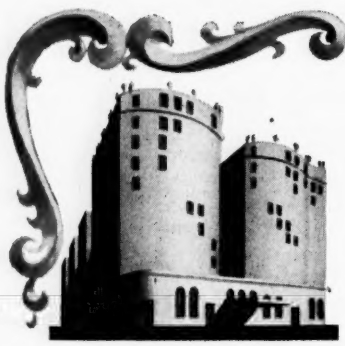
MARTIN J. GREEN

(Continued from page 357)

Green and Dr. Aaron S. Green, and with them he founded the Greens' Eye Hospital. Since the death of his uncles he had been chief of staff and head of that institution.

He was a member of many medical societies, including the American Medical Association, the American College of Surgeons, the International College of Surgeons, the American-Soviet Medical Society, the Pan-American Medical Association and the Pan-American Congress of Ophthalmology.

Ophthalmology was to Dr. Green an ideal as well as a profession. He held the belief that in many cases social delinquency and social handicaps are due directly to defective vision. In addition to his work in cataract surgery, he is perhaps best known for his contribution to the technic of corneal transplantation. He restored vision to many patients. His death at the early age of 46 is a loss to ophthalmology.



C. J. MACK
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LA "Revista del Colegio Internacional de Cirujanos" *(The Journal of the International College of Surgeons)* es una publicación bimestral que constituye el órgano oficial del referido Colegio (fundado en Ginebra, Suiza, en 1935). En esta revista se publican artículos originales de investigación, observación clínica y trabajo experimental sobre temas quirúrgicos. Sirve, además, como vehículo para dar a conocer las actividades del Colegio Internacional de Cirujanos a sus miembros y a todos aquellos que se interesen por los adelantos e innovaciones de índole quirúrgica en el mundo entero.

Los Capítulos Latino-americanos del Colegio Internacional de Cirujanos tienen en ésta revista el medio oficial en que se recogen sus actividades. Actualmente la revista se halla enriquecida por una Sección especial en español en la que se publican no sólo trabajos científicos originales de cirujanos de Hispano-América sino tambien noticias referentes a los miembros y Capítulos de los paises de habla española, así como una información general en relación con la cirugía. A todos aquellos profesionales, cirujanos y médicos, que se interesen por los temas quirúrgicos habrá de serles de gran utilidad el subscribirse a ésta publicación.

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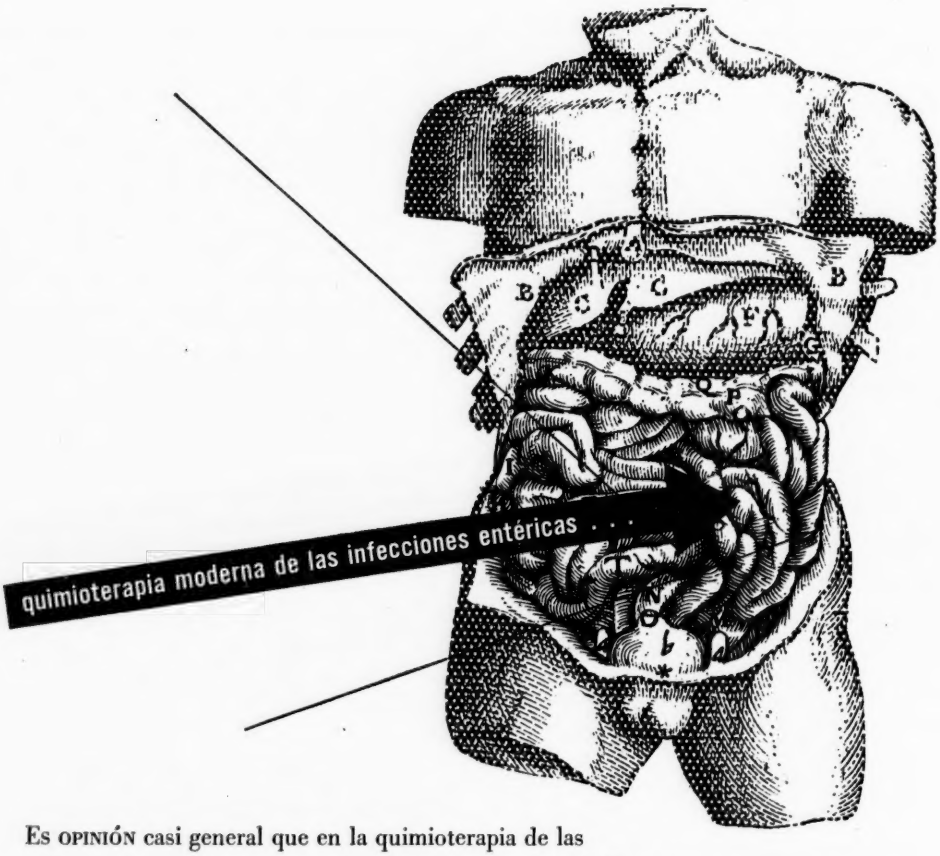

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Sección en Español

Asistencia Hospitalaria

MANUEL A. MANZANILLA, M.D., F.I.C.S. (HON.)
México, D. F., México

ANTIGUAS CIVILIZACIONES

EL origen de los refugios o asilos para enfermos debe considerarse, desde el punto de vista histórico, como un fenómo inherente al determinismo de la vida social. En efecto, prescindiendo de cualquiera afirmación teórica, la existencia de dichos asilos o refugios con anterioridad al Cristianismo es un hecho perfectamente demostrado, a pesar de su carácter esporádico y aun cuando su concepción ética haya sido distinta de aquella de las instituciones fundadas y extendidas dentro de la religión de Cristo.

En la crónica cingalesa "Mahawamsa," se tiene noticia de que Pandutalkabhayo, rey de Ceilán, erigió un hospital allá por el año 437 A.C. El rey Dutthagamini, lejano sucesor del acabado de mencionar, decía antes de morir, en el año 137 A.C., lo siguiente: "En diez y ocho diversos lugares he mantenido hospitales, provistos de los elementos necesarios, de medicinas y personal idóneo para la cura de los enfermos." En la India, además de los hospitales para seres humanos, funcionaban también hospitales destinados a los animales.

En Egipto, en los templos de Isis y Serapis, lo mismo que en Grecia y Roma, en los santuarios de Asclepíades o Esculapio, existían locales muy vastos, y bien arreglados en ocasiones, destinados a ayudar enfermos que esperaban encontrar alivio por medio de sueños y señales recibidas mientras dormian. En algunos de éstos templos griegos y romanos, se disponía de palestras destinadas a revigorizar a los enfermos crónicos o convalecientes, por la gimnasia, los baños y las fricciones. En el santuario de Epidauro, habían aposentos separados para las parturientes y los moribundos. De estos santuarios dedicados a Asclepíades o Esculapio se formaron, al correr del tiempo, verdaderas escuelas de medicina.

En Grecia, hasta el siglo VI A.C., los médicos encargados de la atención gratuita de los enfermos disponían en la propia habitación de una estancia, el iatreo (iatreion), destinada a las consultas y operaciones, y en su caso al restablecimiento temporal de los pacientes. En ocasiones, los iatreos más frecuentados, como el del Pireo, funcionaban también como escuelas clínicas. En Roma, la imitación del iatreo fué denominada medicina; las grandes familias romanas contaban en sus propiedades rurales con la valetudinaria, que era una enfermería destinada a la atención médica de los esclavos enfermos; las legiones romanas disponían de enfermerías constituídas por un corredor construído al rededor de un patio central.

Los anales árabes citan la obra de los secuaces del Islam en la creación de establecimientos hospitalarios. En el año 707, el califa Al-Walid I Instituyó en el Cairo un hospital atendido por

médicos, al que aseguró rentas apropiadas; además, ordenó el aislamiento de los leprosos y proveyó ocuparse de la suerte de los ciegos. En el siglo IX y en la propia ciudad egipcia, cerca de la gran mezquita, existía un hospital con secciones diferentes para hombres y mujeres, y una poliambulancia abierta los días festivos. Por último, a fines del siglo XIII y asimismo en el Cairo, fué edificado el célebre hospital de Al-Mansur, provisto de locales separados para febricitantes, heridos, enfermos de la vista, convalecientes, con servicios médico y farmacéutico y cátedra anexa para la enseñanza.

ORIGENES CRISTIANOS

La asistencia a los enfermos pobres constituye para el Cristianismo el ejercicio de la virtud capital del Evangelio: la caridad, el amor al prójimo. La identificación ideal del enfermo pobre con la persona misma de Jesús es el principio animador del grandioso movimiento histórico, que traduce el sublime fervor de la sociedad cristiana, empeñada en las obras de asistencia, con especialidad la hospitalaria.

Inútil sería buscar en época anterior a la paz constantina ejemplos de asilos a refugios en las diversas comunidades cristianas, no obstante la ya extensa difusión del pío ejercicio de la beneficencia. La iglesia católica, apostólica y romana, en las reuniones litúrgicas instituye en caridad la limosna, para socorrer a los enfermos y los pobres. El principio de la hospitalidad ha progresado tanto en los albores de la nueva civilización, que se afirma con la erección de asilos adecuados, llamados xenodocios en Oriente y hospitales en Occidente, denominaciones cuya etimología expresa en ambas el alojamiento para extraños, para huéspedes. Su difusión procede dentro de límites fijos: los obispados, las diaconías, los monasterios, las casas de personajes acaudalados. Durante muchos años, en tanto el progreso de la vida civil no alcanzó facilidad en las communicaciones y prosperidad en la industria hotelera, dichos establecimientos atendieron simultáneamente a viandates, peregrinos y enfermos, cumpliendo con el precepto de las obras de misericordia.

El Oriente sobrepasó al Occidente en la expansión de las obras de asistencia, como resultado de la más rápida extensión del Cristianismo en aquellas tierras. Medio siglo después del edicto de tolerancia, la actividad cristiana asistencial se había propagado en forma tan notable que se cita el caso del sacerdote pagano Arsace, quien en carta escrita el año 362 aconsejó como óptimo expediente en la lucha contra los cristianos, imitar la austeridad de sus costumbres y su benevolencia hacia peregrinos y enfermos, y ordenó para ello la fundación de xenodocios para beneficiar sin distinción religiosa a los necesitados.

En el año 534, ya el Código Justiniano hace mención del adelanto existente en la separación de las diversas clases de socorro, aun cuando persistía la promiscuidad en la asistencia de las obras pías. Una información del siglo XII da cuenta del desarrollo alcanzado, en aquel entonces, por el servicio médico en la organización hospitalaria. En efecto, el emperador bizantino Juan y su consorte Irene fundan en 1136 en Constantinopla un hospital o xenodocio de 50 camas, dividido en cinco secciones, a saber: una quirúrgica, dos para enfermos comunes, una para enfermos graves y una para mujeres. Cada sección contaba con dos médicos, enfermeros y sirvientes, sujetos a turnos regulares y supeditados a dos médicos directores; anexo al hospital se disponía de un servicio para consulta, con

dos cirujanos y dos médicos, y además una sala de 24 camas para enfermos crónicos y otra especial para monjes enfermos; el servicio de farmacia estaba atendido por un farmacéutico jefe y cinco subordinados; el hospital tenía una estancia para baños. En fin, casi todos los monasterios y residencias episcopales, tanto en Oriente como en Occidente, tenían alojamientos para peregrinos.

CONCEPTO ASISTENCIAL

El ejercicio de la caridad, virtud capital del Evangelio, fundada en el amor al prójimo, integra socialmente el concepto y ejercicio de beneficencia. La beneficencia tiende pues a satisfacer una necesidad de aliviar el sufrimiento, de mejorar las condiciones de ciertos individuos, inspirándose exclusivamente en un principio ético religioso, que impóne el deber de la solidaridad humana, el amor a los propios semejantes y la limosna a los pobres. Primitivamente, la virtud de hacer el bien al prójimo se confundió indistintamente con el concepto de ayudar al prójimo, usándose largo tiempo como términos sinónimos beneficencia y asistencia. Ha sido hasta recientemente, en los tiempos modernos, cuando precisándose el concepto filosófico, bajo la influencia de las ideas y la acción de las condiciones económicas y sociales, que se ha llegado a establecer una acepción clara en el concepto y definición actuales, no obstante que un conjunto de particulares concepciones de orden social y económico, lo han hecho difícil de entender o precisar en algunos países.

La asistencia, a pesar de la impropia designación que Malthus y su escuela le han dado de caridad legal, debe considerarse filosóficamente como una función pública y social, que la comunidad desarrolla por conducto del estado, con fines de reparación social y sin reconocimiento de factores sentimentales o religiosos para su realización, cumpliendo en esta forma con un deber cuyo principio es la provisión y cuyo objetivo es la utilidad general. A pesar de todo, la obligación de asistencia es en algunos países todavía un concepto teórico, una obligación moral, un deber puramente administrativo, pues los indigentes no poseen un derecho al socorro, basándose la acción en consideraciones sentimentales y no en el concepto de reparación social obligatoria del estado. Asimismo, en otros países se considera a la asistencia como la resultante de un conjunto de elementos espirituales, a saber: el sentimiento religioso, el humanitario, el piadoso y el de solidaridad, los que se estiman como esenciales para la vida civil.

Al producirse el progreso científico e instaurarse el método experimental, los hospitales no pudieron substraerse a la órbita del trascendente movimiento y entonces, a la misión original de la caridad cristiana hubo de agregarse la finalidad del estudio y de la investigación. Al acontecer esta reforma en la orientación hospitalaria, la enseñanza teórica universitaria se completa con la observación clínica en los hospitales, que a partir del siglo XVII adquieren en las grandes ciudades características de verdaderas escuelas de medicina, cirugía y farmacia; entonces, el acercamiento de los estudiantes al lecho del enfermo, en ocasiones como enfermeros, determina fecundos resultados que conducen a la institución de las clínicas universitarias.

En el siglo XIX la técnica nosocomial progresó de modo particular, en virtud del poderoso incremento que las ciencias biológicas reciben en la segunda mitad de la centuria. Se procede nosológicamente a la selección de los enfermos,

integrando salas o departamentos hospitalarios distintos, convertidos a veces en verdaderos hospitales para determinada especialidad. Al propio tiempo, se adoptan los nuevos medios de investigación diagnóstica y de terapéutica, y de este modo las instituciones hospitalarias, dependientes o conectadas en su mayor parte con las universidades, para el estudio y la investigación sistemática, se perfeccionan científicamente en su aspecto técnico.

A continuación, bajo la influencia de las ideas predominantes y la acción de las condiciones económicas y sociales, las instituciones hospitalarias limitadas en su origen al funcionamiento en caridad, dan paso a la intervención del estado y, al transformarse progresivamente su primordial directriz filosófica, tiene lugar la conversión de la beneficencia en asistencia en los países de tendencia laica, y especialmente en aquellos de estructura política basada en el laicismo. De esta manera, al perfeccionamiento científico ya expuesto en su aspecto técnico, se suma el perfeccionamiento técnico en su aspecto social, integrándose desde luego la unidad fisonómica asistencial que es norma en el funcionamiento consuetudinario y en la misión sistemática del hospital moderno.

EDIFICIOS Y FUNCIONAMIENTO

Los xenodocios ordinarios, los hospitales medievales, sin características particulares y de proporciones reducidas, fueron substituídos en el Renacimiento por las grandes aulas nosocomiales, los edificios monumentales, las espléndidas concepciones artísticas. La magnificencia de estas nuevas fábricas, sus proporciones grandiosas, su valor artístico, contrastaron con sus deficientes condiciones higiénicas y sanitarias, agravadas entonces por su ubicación inusitada en el corazón de las ciudades.

A la concentración de enfermos en los grandes edificios de tipo unitario, sucede el pensamiento de construir en pabellones o edificios separados, vistos los resultados satisfactorios obtenidos en la improvisación de barracas hospitales, durante la guerra de Crimea (1855–1856) y en la norteamericana de sucesión (1860–1865). Sin embargo, no tarda en aparecer en los Estados Unidos de América un nuevo tipo de edificio único, de varios pisos, con estancias para uno o varios enfermos, que tiende al abandono de los pabellones aislados, y da margen a discusiones, meditaciones y estudios, orientados a fijar desde luego lineamientos técnicos para las construcciones hospitalarias modernas, tanto desde el punto de vista de las relaciones recíprocas en el manejo de los grandes y los pequeños hospitales, cuanto de aquel referente al tránsito, dimensión de los edificios y disposición de los mismos. En la actualidad se acepta que en las construcciones y funcionamiento hospitalarios deben regir determinados lineamientos fundamentales, que mencionaremos sucintamente.

Los límites de la región que debe ser atendida por un hospital completo cualquiera se determinan por la distancia que el enfermo pueda recorrer en treinta minutos como máximo. El hospital completo, considerado como centro sanitario de su región, debe comprender todos los servicios de diagnóstico y tratamiento, en estrecha conexión con los centros de investigación de los dispensarios, los de cuidados preventivos y los servicios sociales para enfermos. Determinados enfermos (tuberculosos, crónicos, incurables, convalecientes) deben instalarse en establecimientos especiales, pudiéndose destinar dentro de lo posible

un hospital completo para determinados grupos de enfermedades.

El sistema mejor y más económico de un hospital completo parece ser actualmente la construcción vertical en bloque, de varios pisos, con corredor intermedio. La adopción del sistema de edificio principal con anexos (sistema de trabazones) o de edificio central con varias alas (sistema del peine), depende no solamente de la importancia del número de camas, sino aun de la situación urbana y de la extensión del terreno disponible. El número de camas depende de la progresión aritmética que rige la agrupación de los servicios unitarios, progresión que todavía no está definitivamente precisada.

La organización técnica de los grandes y de los pequeños centros hospitalarios debe orientarse hacia la cooperación, por razones de economía sistemática en los servicios sanitarios y hospitalarios. La mejor colaboración depende de la situación hospitalaria dentro de la red de comunicaciones de la región sanitaria respectiva y de la eficacia de estas comunicaciones, requiriéndose la estrecha cooperación del servicio de tránsito.

Los servicios de un hospital pequeño pueden concretarse a una sección médica y otra quirúrgica, equipo de rayos X y servicios generales, debiéndose encontrar en condiciones de prestar atención urgente, garantizar el tratamiento de los pacientes externos y el servicio social de los enfermos. En el hospital pequeño, el uso de cuartos por diversas secciones en épocas diferentes permite economizar espacio y reducir gastos, empleando desde luego instalaciones especiales, desplazables y móviles.

La construcción moderna relacionada con la función del hospital realiza un perfeccionamiento arquitectónico de aspecto trascendente, que se suma a todo lo expuesto, dando por resultado la creación del instrumento apropiado, base necesaria para el vuelo de la obra científica, la bondad del esfuerzo técnico y el empeño de la acción social, en marcha hacia la progresiva consecución de la mejor y más grande realidad de asistencia hospitalaria.

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SUMMARY

It is pointed out that the establishment of asylums for invalids should be considered from the historical point of view as an essential factor in the evolution of social life. Such institutions existed even before the Christian era; they were scattered, however, and their conception was different from that of the Christian institutions.

Hospital assistance had its origin in Christianity, being established originally in the practice of charity, of love of one's neighbor, the outstanding virtue of the Gospel. The progress of this magnificent historical movement led to the establishment of suitable asylums, called "xenodocios" in the Orient and hospitals in the Occident.

On the basis that the practice of charity integrates socially the concept and practice of beneficence, originally the terms "beneficence" and "assistance" were used synonymously, the

concept of doing good to one's neighbor being united with that of aiding him. Through a process of evolution there has developed the present concept of "assistance." As a consequence of this change in philosophical direction, the Christian work of hospital beneficence has been converted in various countries into hospital assistance, an obligatory social service of the state.

Characteristic demands were made on hospitals for scientific progress and establishment of the experimental method. This led to perfection of the technical aspects of the hospital, with the idea that a hospital organized as a center of study and investigation would acquire to a certain extent the characteristics of a university. Hence there has been a tendency for hospitals to function in dependence on or in close contact with universities, completing in a practical way the theoretic teaching of the universities and becoming centers for study and investigation for the sake of scientific progress and of improvement of the social service of hospital assistance.

The important steps in the evolution of the structure and function of hospitals are cited, in order to show as clearly and concisely as possible the fundamental principles which should govern the organization and work of modern hospitals with a view to progress toward the best possible hospital assistance.

RÉSUMÉ

Un facteur essential dans l'historique de l'évolution de la vie sociale est la fondation d'asiles pour les invalides. De tels institutions existaient dans l'antiquité, avant l'ère chrétienne, mais elles étaient peu nombreuses et très éparses.

L'assistance hospitalière est d'origine chrétienne, ayant sa conception initiale dans la pratique de la charité, dans l'amour du prochain, le grand vertu qu'enseigne l'Évangile.

La pratique de la charité renferme la conception et la pratique de la bienfaisance. Bienfaisance et assistance sont deux termes employés comme synonymes. C'est l'idée de bonté à l'égard du voisin unie à celle de l'aider. La conception actuelle d'assistance a été dans certains pays convertie en assistance hospitaliére, en service sociale obligatoire de l'état.

Les hôpitaux contribuent au progrès scientifique et à la vulgarisation des méthodes expérimentales. Cela a entraîné des perfectionnements techniques et a converté beaucoup d'hôpitaux en centres d'étude et de recherches.

Il y a une grande tendance à unir intimement les hôpitaux aux universités, afin de compléter par un entraînement pratique l'enseignement théorique des écoles.

Les étapes importantes dans l'évolution de la structure et de la fonction des hôpitaux sont décrites afin de pouvoir formuler les principes fondamentaux qui doivent gouverner l'organization et le fonctionnement des hôpitaux et aussi afin d'obtenir le progrès maximum dans les méthodes et les principes de l'assistance hospitalière.

СВОД

Указано, что с исторической точки зрения учреждение домов для инвалидов должно считаться существенным фактором в общественной эволюции. Такие учреждения существовали еще в древности до христианской эры; но они были изолированы и разбросаны, и их возникновение отличалось от зачатия христианских учреждений.

Больничная помощь берет свое начало в христианстве, являясь первоначальным применением милосердия и любви к соседу, двух выдающихся евангельских добродетелей. Прогресс этого великолепного исторического движения привел к

учреждению подходящих убежищ, на востоке называемых «ксенодоциос», а на западе «госпиталь».

Так как практика милосердия включает общественный принцип и практическое применение благодеяния, то первоначально термины «помощь» и «благодеяние» были синонимами, идея добра к соседу будучи связана с идеей помощи ему. В курсе эволюционного процесса развилась теперешняя идея «помощи». В результате этой перемены в философском направлении христианская работа госпитального благодеяния превратилась в разных странах в госпитальную помощь, являющейся обязательной государственной функцией.

Теперь, определенные условия, содействующие научному прогрессу и установлению экспериментальной методы, начали требоваться от госпиталей. Это повело к техническому усовершенствованию с той целью, чтобы госпиталь, организованный как центр научного исследования, приобрел характерные особенности университета. Отсюда развилась тенденция больниц функционировать в тесной связи с университетами, таким образом дополняя практически теоретическое университетское обучение и превращаясь в центры изучения и исследования ради научного прогресса и улучшения общественной функции госпитальной помощи.

Для того, чтобы показать насколько возможно и точно основные принципы, регулирующие организацию и работу модерного госпиталя, имеющего своей целью развитие найлучшей госпитальной помощи, даны найболее важные ступени в структурной и функциональной эволюции госпиталя.

IN MEMORIAM

EL DR. ERNESTO NAVARRE, F.I.C.S.*
(Bolivia)

La clase médica en general y la Asociación Médica Boliviana y la Facultad de Medicina en particular, fueron ruda y dolorosamente conmovidas con el fallecimiento del Dr. Ernesto Navarre. El fatal suceso ocurrió cuando el Dr. Navarre presidía la sesión en que la A.M.B. iba a elegir la nueva mesa directiva.

El Dr. Navarre nació en La Paz, el 8 de noviembre de 1890. Hizo sus estudios universitarios en esta misma ciudad, habiendo concurrido al 3er Congreso de Estudiantes Sud-Americanos reunido en Lima el año 1912. Estuvo tres años en París ampliando sus estudios de Medicina. Vuelto al país, ingresó al Hospital General como médico interno. Fué luego médico de sala y director del Hospital. En 1932 concurrió a la compaña del Chaco, donde permaneció 14 meses. Estuvo en las acciones del 7 al 10 de noviembre de 1932 en el "Kilómetro 7" y en el combate de Nanagua en enero de 1933.

En la Faculta de Medicina fué catedrático de Patología Externa y últimamente de Historia de la Medicina además, distinguiéndose siempre por su brillante desempeño. Era decano de la Facultad y vice-rector de la Universidad, regente del Capítulo Boliviano de Le College International de Chirurgiens y Presidente de la Asociación Médica Boliviana.

Sus funerales constituyeron una honda manifestacion de pesar y un sincero reconocimiento de sus muchos méritos.

* Obituario reproducido de la *Gaceta Medico-Quirúrgica de Bolivia.*

En las manos del cirujano está la vida del paciente

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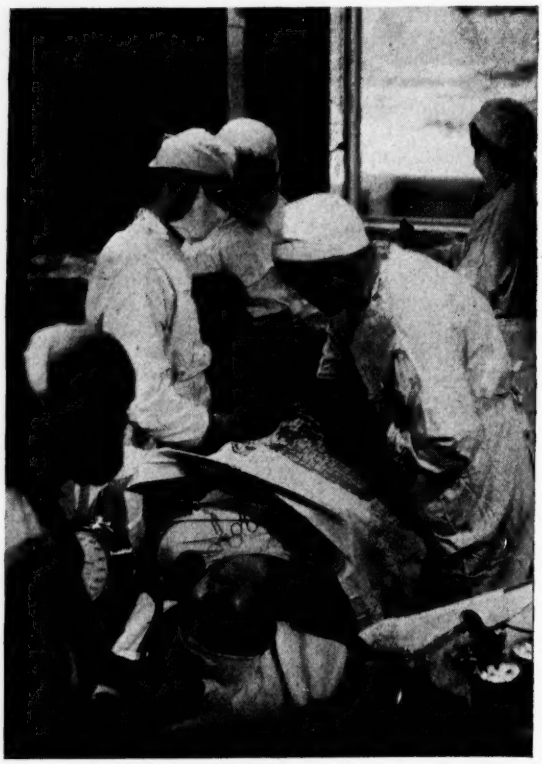

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Breves Datos Historicos de Algunos de los Hospitales Mas Antiguos de las Americas

ANTONIO MOLINA, M.D.
NUEVA YORK, N. Y., ESTADOS UNIDOS
Director de la revista "América Clínica"

LOS historiadores discrepan acerca de la existencia de hospitales en la América precolombina. Según algunos, entre ellos Presco, los aztecas tenían hospitales en México. No obstante, lo más probable es que los pueblos indígenas de América no conocieron esta clase de instituciones hasta que llegaron los conquistadores. Mejor dicho, el hospital en el Hemisferio Occidental fué obra de los españoles, que a este respecto se adelantaron en México más de un siglo, a los Estados Unidos y al Canadá.

Carlos V y Felipe II de España promulgaron leyes que obligaban a construir un hospital de enfermos no contagiosos, anejo a la iglesia, y otro de infecciosos, en el extrarradio de la población. El Dr. Carlos Martínez Durán, profesor de la Universidad de San Carlos, de Guatemala, al comentar la labor de los españoles en América dice lo siguiente: "Toda la medicina moderna de la América Española es oriunda del hospital. . . . La fundación de hospitales por conquistadores y misioneros, es una de tantas pruebas para conocer y affirmar el contenido espiritual de la conquista española. Es la fuerza espiritual de la conquista, lo universal de sus alcances, lo que mueve a guerreros y frailes, y por ello mismo, lo que sale de España es la flor de la península. Los hospitales coloniales han asistido por cerca de cuatro siglos a todos los progresos de la medicina." La administración de los hospitales en la América española fué obra exclusiva de dos órdenes religiosas: la Orden de los Hermanos Hospitalarios de San Juan de Dios, fundada en España por el portugués Juan de Dios, y la Orden Hospitalaria de Religiosos de Nuestra Señora de Belén, fundada en Guatemala por Pedro de Bethencourt y por Fray Rodrigo de la Cruz, en el siglo XVII.

Los primeros hospitales del Nuevo Mundo se construyeron durante el siglo XVI. Actualmente gran parte de ellos han desaparecido; otros sólo muestran sus ruinas, pero muchos de estos hospitales aun perduran a través de los siglos. De estos últimos, el más antiguo de todos y el de mayor importancia es el Hospital de Jesús, de la ciudad de México, que presta servicios, sin interrupción, desde hace más de cuatrocientos años. Sin embargo, aunque la gran mayoría de los historiadores consideran que el Hospital de Jesús es el primero que se fundó en el continente americano, hay autores que opinan que el primer hospital de América fué el Hospital de San Nicolás de Bari, fundado por Fray Nicolás de Ovando en el año 1502 en la isla La Hispaniola (Santo Domingo). Hoy sus ruinas son mudo testigo de su pasado.

El Hospital de Jesús fué fundado por el conquistador Hernán Cortés en el año de 1524 (1527 ?). Primitivamente se llamó Hospital de la Purísimo Concepción y se construyó en el mismo lugar donde el Emperador Montezuma se encontró por vez primera con Hernán Cortés. Los planos del edificio fueron obra del arquitecto español Pedro de Vázquez. Ulteriormente, en 1532, se le denominó Hospital de Jesús Nazareno. Al primitivo edificio se han ido agre-

gando nuevas construcciones, hasta completar lo que actualmente constituye "la manzana del Hospital de Jesús." Todo este conglomerado conserva los diversos estilos que prevalecieron en las diferentes épocas en que se construyeron los edificios anejos; pero tanto el primitivo

El Conquistador del Perú Francisco Pizarro fundó el primer hospital, en Lima, en 1538.

En Brasil, el portugués Braz Cubas fundó el primer hospital, en Santos en año 1543, dándole el nombre de Santa Casa de Misericordia de Santos.

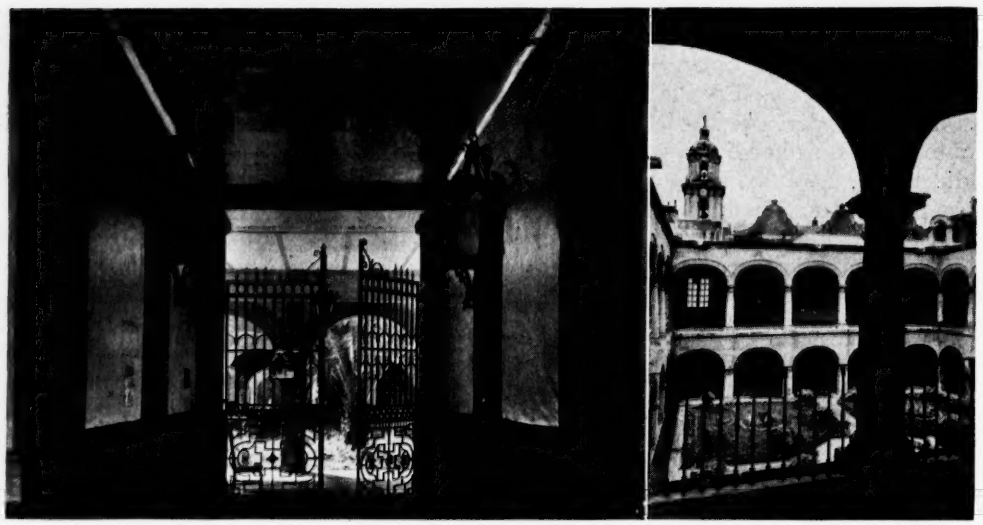

Fig. 1. Hospital de Jesús. Entrada principal del antiguo edificio (a la izquierda), y parte antigua del hospital (a la derecha).

edificio de amplios patios y bellas arquerías, como las construcciones adyacentes y el templo cuya torre está coronada por la estatua de piedra del Conquistador, todo es expresión del más puro estilo colonial. No obstante, el hospital tiene todos los adelantos de la técnica moderna.

El tercer hospital de América fué el Hospital de la Misericordia, fundado en Guatemala por Jorge de Alvarado, en 1527. Fué destruído pocos años después. En México se inauguró en 1532 otro hospital en Patzcuaro; en la actualidad todavía presta servicios con el nombre de Hospital de Santa Marta. En 1535 se construyó en la ciudad de México el primer hospital de infecciosos.

La institución hospitalaria más antigua que hoy día existe en Brasil es el Hospital de la Misericordia. En 1582, o sea ochenta y dos años después que el Almirante portugués Pedro Alvares Cabral descubrió las tierras del Brasil, arribó a sus playas una escuadra compuesta de 17 barcos y 3,000 hombres, al mando del Capitán Baldez, después de sufrir las penalidades de una larga y dura navegación. Los miembros de la tripulación, heridos y enfermos, fueron asistidos por el padre Anchieta, de la Compañía de Jesús. Así se inició este hospital, al cual más tarde se le denominó Hospital de Nossa Senhora da Misericordia. Hasta 1840 el Hospital de la Misericordia fué una enfermería pri-

vada. Desde entonces ha sido varias veces restaurado y ampliado; en la actualidad esta institución es un hospital privado que consta de 31 salas y más de 900 camas. Durante el año 1943 fueron tratados 8,512 enfermos y un total de 123,754 pacientes de consulta externa. Dos años atrás se creó en el Hospital un gran laboratorio para la preparación de productos de uso parenteral; este laboratorio llegó a fabricar en un año

Fig. 2. Fachada del nuevo sanatorio (inaugurado recientemente). Anexo perteneciente al Hospital de Jesús.

441,776 ampollas. También existe un magnífico Instituto de Fisioterapia y un espléndido equipo de radium. El Hospital de la Misericordia cuenta asímismo con un centro de enseñanza de post-graduados.

En Norteamérica, los primeros hospitales se construyeron en el siglo XVIII. Como puede suponerse, las condiciones higiénicas de los hospitales de equella época dejaban mucho que desear. Las salas de cirugía estaban condenadas casi irremisiblemente a la infección. Sobre todo había cuatro terribles dolencias que por su persistencia en estos centros se les llamaba "enfermedades de hospital." Estas eran la erisipela, piohemia, septicemias y gangrenas. Las estadísticas de los hospitales eran aterradoras; el índice de mortalidad en las amputaciones ero el cuádruple de el registrado en la práctica privada. Las heridas en aquella era pre-antiséptica raramente cicatrizaban por primera intención. En estos hospitales del siglio XVIII los enfermos estaban materialmente apiñados, no siendo raro que cada cama alojara a dos enfermos.

Lister y Pasteur iniciaron una nueva era llena de esperanzas, que lógicamente repercutió en la organización de los

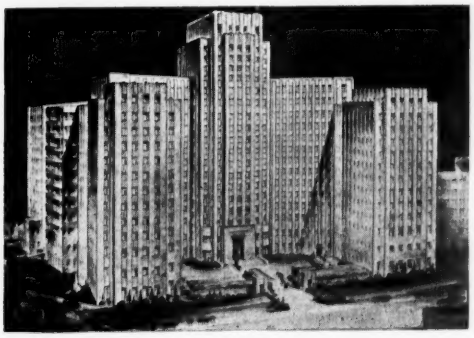

Fig. 3. El actual Charity Hospital de Louisiana en Nuevo Orleans.

hospitales. Lister fué el primero que hacia el año 1865 aplicó las teorias de Pasteur en el quirófano de un hospital, obteniendo un inmediato descenso del índice de mortalidad. Una vez demostrado que las enfermedades contagiosas no se transmitían por el aire sino por microorganismos transportados por las deyecciones, ropas, etc., y por contacto directo de los enfermos, se abandonó el tipo de hospital por pabellones, costoso e ineficiente. El mejor ejemplo de este tipo de construcción en los Estados Unidos es el hospital Johns Hopkins de Baltimore.

El Charity Hospital de Louisiana en Nueva Orleans es uno de los primitivos hospitales de Norteamérica que, después de sufrir múltiples vicisitudes, presta actualmente espléndidos servicios. Fué

fundado por un marinero francés llamado Jean Louis, el cual al morir en 1736 legó su modesta fortuna con el fin de construir un hospital. El original Charity Hospital tenía una capacidad de 24 camas y funció con el nombre "L'Hopital des Pauvres de la Charité" durante cuarenta años, hasta que fué asolado por el ciclón que devastó la población en 1779.

Unidos, data de 1838. Hoy cuenta el hospital con un total de 2,701 camas.

Otro de los hospitales de Norteamérica que goza de gran prestigio es el Pennsylvania Hospital, de Filadelfia, que generalmente está considerado hoy como el hospital más antiguo de los Estados Unidos. Cuenta con ciento noventa y cuatro años de servicios prestados a la humanidad. La idea de construir el

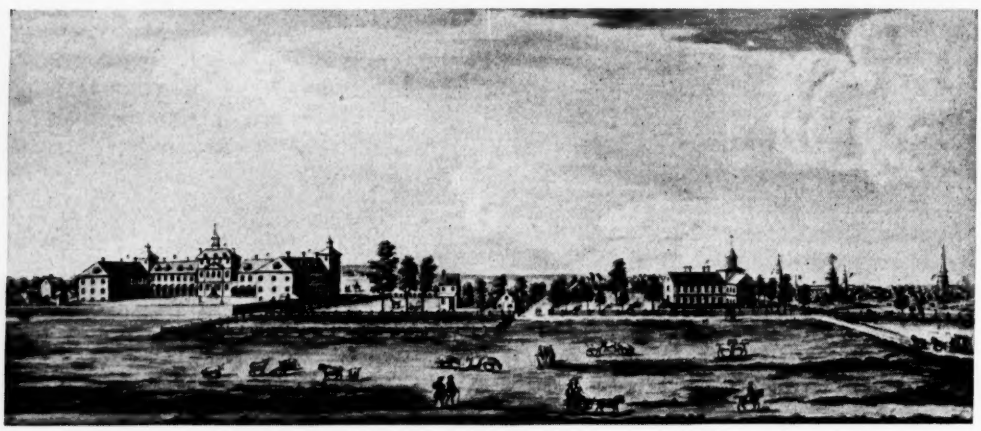

Fig. 4. Reproducción del grabado más antiguo que se conoce del Pennsylvania Hospital, que data de 1750–1760. El edificio grande que se ve a la izquierda es el Asilo Municipal; el otro, más pequeño, de la derecha, en forma de T, es el primitivo Pennsylvania Hospital.

Durante la época de la dominación española en Louisiana, un acaudalado aristocrata, Don Andres de Almonaster y Rojas, Coronel de Milicia, Regidor y Alférez Real, y Caballero de San Carlos, hizo la generosa oferta de 114,000 dólares destinada a reconstruir el antiguo hospital de Jean Louis. En 1782, el Rey Carlos III de España concedió autorización para iniciar las obras. El nuevo hospital se inauguró en 1784, con el nombre de Hospital de San Carlos. De nuevo el Hospital fué reducido a cenizas, en la gran conflagración que sufrió la ciudad en 1809; pero fué reconstruído en 1815. La ubicación del actual Charity Hospital, una de las mejores instituciones hospitalarias de los Estados

Pennsylvania Hospital se debe al Dr. Thomas Bond, notable clínico y cirujano américano del siglo XVIII, el primero que en América practicó la litotomía (1756) y tambien el primero que dió conferencias clínicas (1786). Afortunadamente el Dr. Thomas Bond consiguió que su proyecto obtuviese rápidamente el generoso apoyo y la cooperación de un hombre de la grandeza de espíritu de Benjamín Franklin. A éste se debe en gran parte la erección del magnífico Pennsylvania Hospital, provisto de todos los adelantos técnicos de la época. Este hospital se fundó en 1751, creándose una Junta Directiva de doce miembros, entre los cuales se incluía a Benjamín Franklin y al Dr. Thomas Bond.

La primera descripción histórica del Pennsylvania Hospital la escribió el propio Franklin en 1754. El edificio fué proyectado y construído con un bello estilo colonial, por Samuel Rhoads, un aficionado a la arquitectura, que formaba parte de la Junta Directiva. El nuevo edificio del hospital fué inaugurado en 1755.

Entre los medicos eminentes que desfilaron por las salas del Pennsylvania Hospital debemos citar los siguientes: Benjamin Rush, el único médico que firmó la Declaración de Independencia; John Morgan, Director General del Departamento Médico del Ejército Continental; Philip Syng Physick, el primero que practicó el lavado de estómago contra los envenenamientos, usó la ligadura de catgut y extirpó las amígdalas con amigdalotomo; Caspar Wistar, gran anatómico; William Shippen Jr., organizador, con Morgan, del Departamento Médico de la Universidad de Pennsylvania; John C. Otto, el primero que publicó información sobre casos de hemofilia; William Wood Gerhard, el primero que hizo el diagnóstico diferencial entre la fiebre tifoidea y el tifus exantemático, y George B. Wood, fundador y director de la "Farmacopea de los Estados Unidos" y del "National Dispensatory."

La primera piedra que se colocó en la construcción del Pennsylvania Hospital ostenta la siguiente inscripción:

En el año MDCCLV de la era cristiana
durante el reinado feliz de Jorge II
(porque él procuró la felicidad de su pueblo)
Filadelfia prosperó
(porque sus habitantes tuvieron espíritu de asistencia pública).
Este edificio
Fué fundado piadosamente
Gracias a la subvención del Gobierno
Y a la munificencia privada,
Para el socorro de enfermos e indigentes.
Que Dios misericordioso
Bendiga esta empresa.

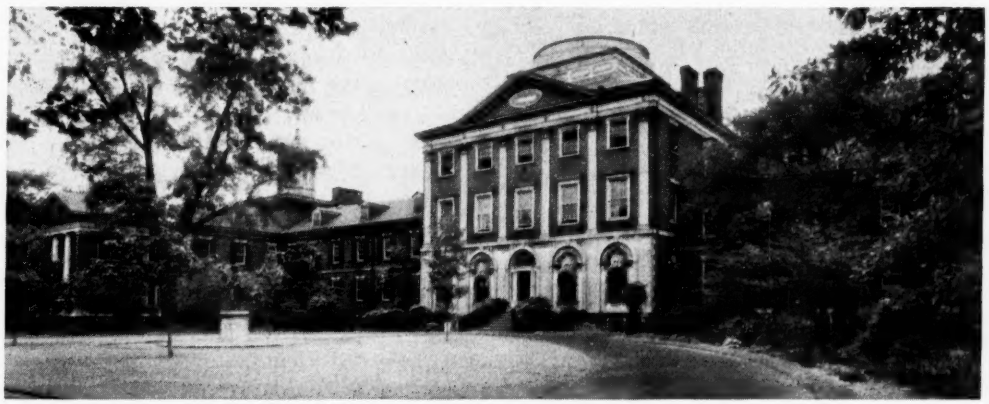

Fig. 5. Actual Pennsylvania Hospital, edificio que fué inaugurado en 1755.

La segunda institución hospitalaria que se creó en este país, y que actualmente figura como el hospital más antiguo de Nueva York y el segundo en orden cronológico de los Estados Unidos, es el New York Hospital, hoy motivo de legítimo orgullo de los neoyorquinos. Con antelación al New York Hospital existía en la ciudad de Nueva York, en 1736, un Hospicio Público y Correccional, ubicado donde hoy se encuentra

el City Hall (Municipalidad) y en el cual se prestaba asistencia facultativa a los enfermos indigentes. Por lo tanto, está justificado considerar que este establecimiento, aunque no era propiamente un hospital en el sentido moderno que le damos a este vocable, fué el comienzo de los servicios hospitalarios municipales de la actual gran urbe, pues, como afirma Henry E. Sigerist, "No se puede negar que en este viejo hospicio el municipio facilitaba asistencia médica gratuita a algunos enfermos pobres." De

Fig. 6. Grupo de edificios del actual New York Hospital, construído en 1932.

esta primitiva enfermería surgió más adelante el Bellevue Hospital, en 1811.

El Dr. Samuel Bard fué el primero que en 1769 puso de manifiesto la necesidad de construir un hospital general en la ciudad Nueva York, para "asistencia y socorro de enfermos y como el mejor medio de enseñanza para estudiantes de la práctica médica." Esta iniciativa fué afortunada, y en 1771 el Rey Jorge III de Inglaterra estatuyó The Society of the New York Hospital. Recién inaugurado, el edificio fué destruído por el fuego en 1775, pero se le restauró poco tiempo después. En 1776, año de la Guerra de la Independencia americana, el New York Hospital admitió los primeros pacientes, que por una ironía del destino eran soldados del Ejército Revolucionario Americano. La admisión de enfermos civiles comenzó en 1791. Hasta el presente el New York Hospital ha estado prestando servicios ininterrumpidos durante ciento sesenta y tres años, abarcando así toda la series de conflictos bélicos de la nación (la guerra con México en 1846, la guerra civil en 1861, la guerra con España en 1898 y la primera guerra mundial en 1917). En la actual Segunda Guerra Mundial, el New York Hospital ha contribuído al esfuerzo bélico con un equipo de 56 médicos y 112 enfermeras. Con razón, el diario neoyorquino *New York World Telegram* en cierta ocasión dijo en sus columnas: "tres organismos han prestado servicios de esencial importancia en todos nuestros conflictos guerreros: el Ejército, la Marina y el New York Hospital."

Desde luego, toda la fructífera labor realizada por esta institución ha sido factible gracias a la entusiasta cooperación de sus clínicos y cirujanos. Las primeras prácticas quirúrgicas efectuadas en este hospital están descritas brillantemente por los doctores Eugene H. Pool y Frank J. McGowan. Estos dos autores describen en su obra la historia de los grandes cirujanos Valentine Mott, Alexander H. Stevens, Valentine Seaman, Wright Post, John Cummings Cheesman y John Kearney Rodgers y de los eminentes clínicos Samuel Bard y David Hosack. En verdad puede decirse que el New York Hospital ha sido durante largos años una de las grandes escuelas de cirugía de todo el país, y rememora a ciertas prestigiosas universidades de Europa, a las cuales en tiempos de pre-guerra afluían estudiantes de todos los lugares del globo. Edward Sheldon, antiguo presidente de la Junta de Gobernadores, dió a esta institución el apelativo de "Universidad Nacional de Medicina." El New York Hospital fué una de las primeras insti-

tuciones médicas mundiales que demostró que la enseñanza de la práctica de la medicina no tiene valor alguno si no va acompañada de la clínica. Hoy, dicho hospital y su anexo, la Escuela de Medicina de la Universidad de Cornell, es un centro cultural del mundo, de primordial importancia.

En 1932 se erigió el actual New York Hospital, que ocupa el imponente rascacielos que forma parte del magnífico grupo de construcciones ubicado en el corazón de la isla de Manhattan. Este enorme bloque, que se reproduce en la fotografía, incluye las siguientes organizaciones: el edificio principal del hospital, la *Payne Whitney Psychiatric Clinic,* el *Lying-In Hospital, The Pediatric Division,* el *Cornell University Medical College,* y la *Cornell University–New York Hospital School of Nursing.*

Entre la diversidad de trabajos de investigación que se llevan a cabo en el New York Hospital destacan los trabajos sobre el shock, causas de las recidivas de la malaria, tratamiento de las quemaduras con sulfamidas, uso de los tubos de vitallium para la reconstrucción de las arterias, injertos de nervios, uso de la penicilina, y trabajos de endocrinología. El año pasado se estableció en el Hospital el primer "banco de ojos" de los Estados Unidos. Para dar una idea de la intensidad de las actividades del New York Hospital, transcribimos los siguientes datos estadísticos pertenecientes al año 1944: número de camas, 1,448; número de enfermos tratados, 65,941; operaciones practicadas, 9,115; radiografías efectuadas, 122,407.

Este breve relato nos muestra que los primitivos hospitales del continente occidental todavía se yerguen incólumes y que sus vetustos muros fueron testigos de toda la historia de los pueblos del continente americano. Hoy día el hospital moderno es el centro de todas las actividades médicas, orgullo de la ciencia y crisol donde se forja el espíritu de las nuevas generaciones de hombres que han de luchar contra el dolor y velar por la salud.

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The Oldest Hospital in America, Mod. Hosp., junio, 1925.

SUMMARY

The first hospitals in the Americas seem to have been established in the sixteenth century, by the Spaniards. They were administered almost entirely by two religious orders. Some of these hospitals are still in existence and in service. Outstanding among these is the Hospital de Jesús in Mexico, which most authorities believe to be the first hospital erected, and which has given continuous service for more than four hundred years. A few authors have expressed the opinion that this institution is antedated by the Hospital de San Nicolás de Bari (Santo Domingo), now in ruins.

In North America the first hospitals were built in the eighteenth century. The Charity Hospital of Louisiana in New Orleans is one of the early hospitals on this continent which is still active, and the Pennsylvania Hospital in Philadelphia is another. The latter is generally considered the oldest hospital in the United States.

The New York Hospital has also given

long and brilliant service. The early surgical work in this hospital has been well described by Drs. Eugene H. Pool and Frank J. McGowan.

The first hospitals naturally left much to be desired from the standpoint of hygiene and sanitation. But the work of Lister and Pasteur in the nineteenth century brought a new era.

This brief report shows how the hospitals of the past have developed into the institutions of today that are the center and heart of all medical activity.

RÉSUMÉ

Les espagnols fondèrent, au seizième siècle, les premiers hôpitaux en Amérique. Ces hôpitaux étaient entièrement sous le contrôle de deux ordres religieux. Certains de ces hôpitaux fonctionnent encore de nos jours. Entre autres, l'Hospital de Jesús, au Mexique, qui, d'après la plupart des autorités, fut le premier hôpital érigé sur ce continent et qui fonctionne depuis plus de quatre cent ans. Quelques auteurs ont exprimé l'opinion que cet hôpital est antédaté par l'Hospital de San Nicolás de Bari (Santo Domingo), aujourd'hui en ruines.

Aux États-Unis, les premiers hôpitaux furent fondés au dix-huitième siècle. Le Charity Hospital of Louisiana à la Nouvelle Orléans est un de nos premiers hôpitaux qui est encore en existence. Le Pennsylvania Hospital à Philadelphia en est un autre et est généralement considéré comme l'hôpital le plus ancien des États-Unis.

Le New York Hospital aussi a depuis longtemps servi le public et joui d'une carrière brillante. La première chirurgie de cet hôpital a été bien décrite par les docteurs Eugene H. Pool et Frank J. McGowan.

Du point de vue de l'hygiène et des conditions sanitaires les premiers hôpitaux laissaient beaucoup á désirer. Mais les travaux de Lister et de Pasteur amenèrent au dix-neuvième siècle une nouvelle ère.

Ce bref rapport montre comment ces hôpitaux des temps passés ont évolué dans les institutions de nos jours, institutions qui sont le centre et le coeur de toutes les activités médicales.

ВЫВОДЫ

Первые госпитали в странах Южной Америки были построены испанцами. Они были под надзором двух религиозных орденов. Некоторые из них сохранились до настоящей поры. Наиболее выдающийся из этих госпиталей, это Hospital de Jesus в Мексике. По мнению многих это первый построенный госпиталь. Он служил безпрерывно более четырех сот лет. По мнению других авторитетов Hospital de San Nicolás de Bari в Санто Доминге, теперь в развалинах, еще старше.

В Северной Америке госпитали появились в восемьнадцатом столетии. Charity Hospital в Новом Орлеансе один из самых старших, хотя Pennsylvania Hospital в Филадельфии обыкновенно считается самым старшим госпиталем в Соединенных Штатах.

El tratamiento del Cancer del Pene

Nuestro Concepto Actual

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ES concepto general que el pene como localización de cáncer es de frecuencia, sino rara, excepcional.

En varias ocasiones hemos manifestado que ese criterio no es exacto; el cáncer de pene, si bien no es una afección común, no es tampoco extremadamente rara.

Hablan elocuentemente en ese sentido las estadísticas del Instituto de Medicina Experimental para el Estudio y Tratamiento del Cáncer, que demuestran que en estos últimos quince años la morbilidad por esta localización neoplásica aumenta progresivamente; mientras en el año 1926 la frecuencia de esta localización no alcanzó al 1 por ciento, en los últimos cinco años ha sobrepasado el 2 y 3 por ciento.

Sentado el diagnóstico de cáncer de pene por la biopsia (criterio impuesto sistemáticamente en este instituto) corresponde siempre resolver su terapéutica por vía de dos tratamientos, a saber: (1) el tratamiento curativo, si es posible, y (2) el tratamiento paliativo.

Entre los tratamientos curativos las experiencias realizadas en este Instituto nos obligan a considerar dos tipos distintos: (A) tratamientos quirúrgicos y (B) tratamientos físicos.

TRATAMIENTOS QUIRÚRGICOS

Siempre que estemos en presencia de un cáncer de pene dispuestos a proceder

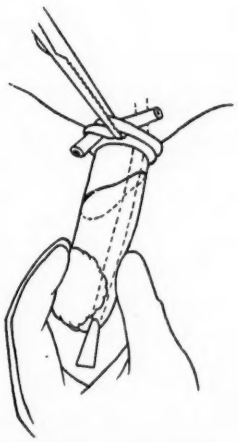


Fig. 1. Amputación del pene. Ligadura en la base. Bujía colocada en la uretra. Trazado en raqueta de la linea de incisión.

Fig. 2. Sección de los cuerpos cavernosos y de su envoltura fibrosa. (Cathelin.)

Resumen de un trabajo presentado en la tercera Asamblea Internacional del Colegio Internacional de Cirujanos, 1941.

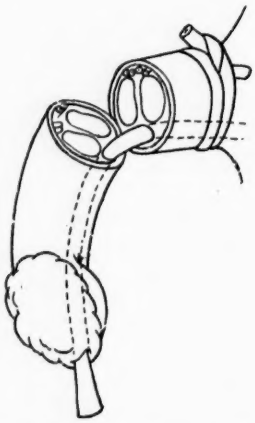


Fig. 3. Sección de los cuerpos cavernosos. Unicamente queda sin seccionar la uretra. (Cathelin.)

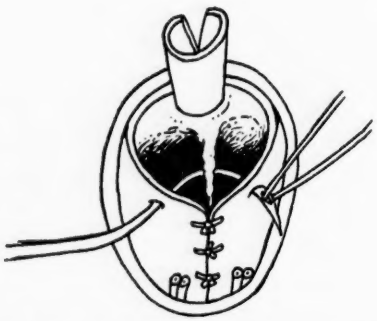


Fig. 4. Sutura de la vaina de los cuerpos cavernosos. Se ve la aguja tomar el rafe mediano. La uretra se ha seccionado 1 cm. adelante. (Cathelin.)

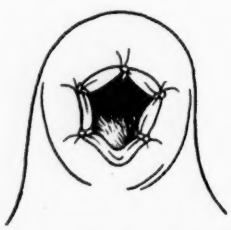


Fig. 5. Operación terminada con sutura uretra cutánea. (Cathelin.)

a su extirpación por métodos quirúrgicos, debemos optar por uno de los cuatro procedimientos siguientes: (*a*) la exéresis simple del tumor, (*b*) la amputación parcial, (*c*) la amputación total y (*d*) la emasculación.

El primero de ellos (exéresis simple), que ha sido y es el procedimiento de elección, es el que practicamos cuando las condiciónes de la afección lo permiten (evolución reciente, lesión localizada, poco proceso infiltrativo).

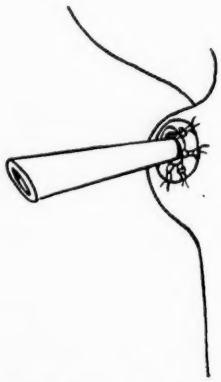


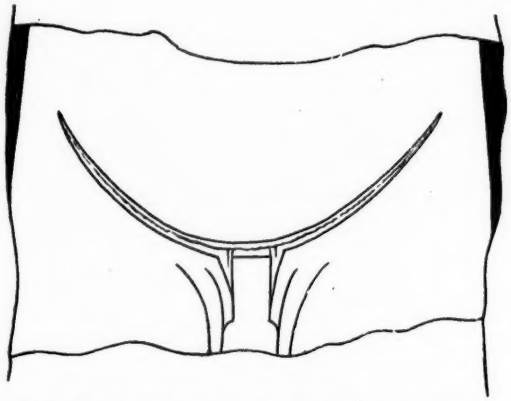
Fig. 6. Aspecto de la amputación con el drenaje temporario. (Cathelin.)

Sin embargo debemos destacar que son muy contados los casos en los cuales el tumor reune las condiciónes necesarias indispensables para realizar un tratamiento tan limitado que resulte eficaz.

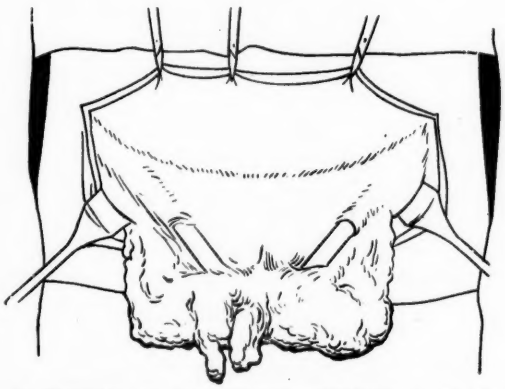
La amputación parcial es la operación que con más frecuencia se realiza en el Instituto de Medicina Experimental, más o menos conservadora según sea la extensión del tumor.

La amputación total unicamente la indicamos cuando la neoplasia ha invadido todo el órgano, o cuando sospechamos completa invasión de los cuerpos cavernosos.

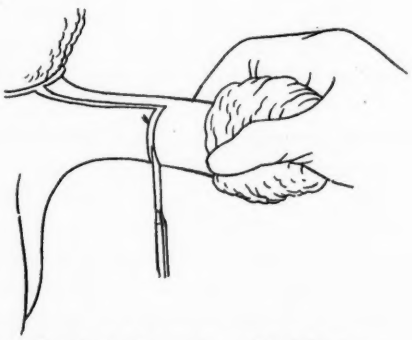
Fig. 7. Tecnica de la operación de Young: amputación parcial y total con vaciamiento ganglionar.



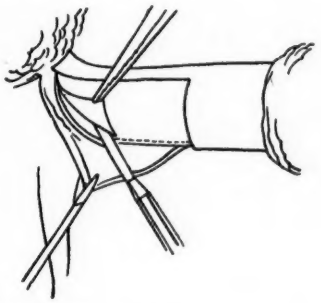
A. Incisión curva que va de una ingle a la otra, e incisiones paralelas que toman la base del pene.



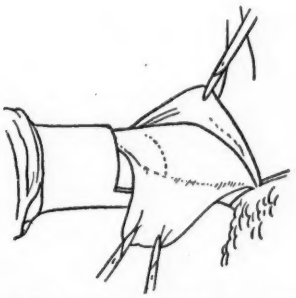
B. Disección de las regiones inguinales y de la región suprapubica. Pueden verse los cordones espermáticos.



C. Incisión de la piel en la región del pene.



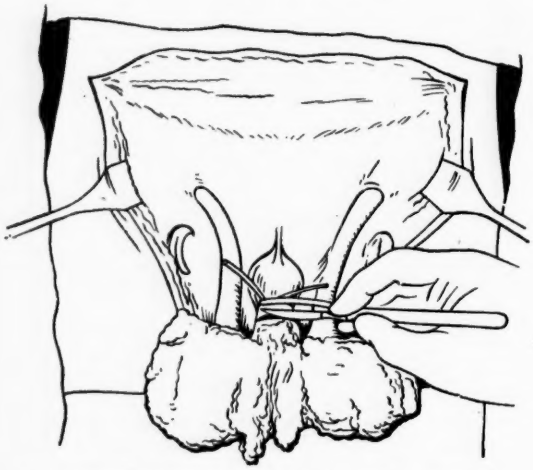
D. Disección de la región peneana.



E. La disección terminada. Queda expuesto el cuerpo cavernoso.

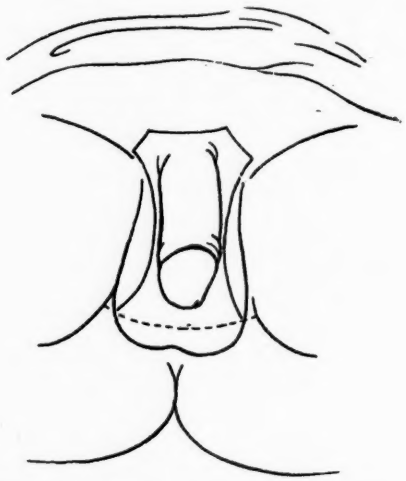
F. Amputación parcial: sección del pene. Nótese la distancia altura de sección entre los cuerpos cavernosos y el cuerpo esponjoso (uretra).

Fig. 7. (Continuación)

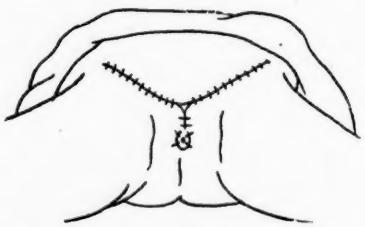


G. Amputación total: sección del pene en caso de amputación total.

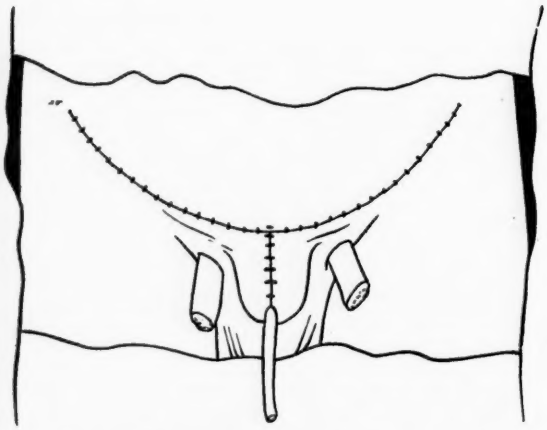
Fig. 8. Emasculación.



A. Emasculación total. Trazado de la incisión.



B. Resultado operatorio de una emasculación total.



H. Operación terminada: drenajes en regiones inguinales y sonda en la uretra. Se ha respetado cordones y contenido escrotal.

La emasculación, operación mutilante que supone la exérsis de todo el sistema de órganos genitales externos, la realizamos, casi diríamos, por excepción—criterio que justificamos ampliamente recordando que jamás el testículo está invadido en los cánceres del pene.

En efecto, las vías linfáticas son en un todo independientes y distintas, y la progresión del tumor peniano hacia la glándula genital por continuidad no se realiza dada la protección eficaz que ejerce la albuginea testicular.

Aún en los casos en que el tumor es muy grande y puede llegar al escroto y la piel del pubis, respeta siempre la glándula genital.

Insistimos en este recuerdo anatómico y en este hecho clínico porque la experiencia nos autoriza a afirmar que la emasculación debe practicarse excepcionalmente en los tumores de pene. Es un intervención mutilante que no se justifica sino excepcionalmente.

Todas estas intervenciones, cualquiera sea la extensión de las mismas, las realizamos siempre con la ayuda del bisturí eléctrico, en sus dos formas de aplicación: sección o corte y eléctrocoagulación.

El bisturí eléctrico tiene en el tratamiento de estas lesiones un valor de excepción. Son innumerables las ventajas que reporta: (1) realiza una buena hemostasis; (2) coagula los vasos linfáticos evitando la propagación del proceso séptico que con frecuencia existe agregado a la lesión; (3) impide la embolización de células cancerígenas; (4) en los sitios donde se realiza la incisión destruye elementos neoplásicos e impide la posibilidad de los injertos.

Repetimos que cualquiera sea el procedimiento quirúrgico a adoptar, siempre en el Instituto se realiza con la base del bisturí eléctrico.

TRATAMIENTOS FÍSICOS

Entre los procedimientos físicos hay que considerar a la curieterapia y a la radioterapia profunda. En estes Instituto en un principio muchos tumores de pene fueron tratados con radium (radium puntura y radium en superficie).

El advenimiento del bisturí eléctrico con sus resultados ha substituido con ventajas al procedimiento curieterápico. No queremos con ello significar que este último tratamiento no sea eficaz, pero si creemos que los resultados permiten afirmar que *el bisturí eléctrico realiza con ventajas el efecto terapéutico del radio.*

El radio tiene como formal enemigo en su aplicación a dos factores: la infección y la radio resistencia relativa de ciertos tipos celulares. Es así como en los nevocarcinomas y en los epiteliomas espinocelulares e infectados el radio se manifiesta insuficiente como terapéutica efectiva y en esos casos para obtener efectos curativos eficientes debe aplicarse a los enfermos dosis tales que significan grandes mutilaciónes. Por eso en los procesos de neoplasias destructivas donde la curieterapia signifique mutilación debe preferirse siempre el tratamiento quirúrgico con la ayuda del bisturí eléctrico.

En trabajos anteriores hemos destacado que en el Instituto no hemos tenido un gran porcentaje de éxitos efectivos con la radiumterapia en los tumores de pene, al punto tal que desde hace años la practicamos unicamente como tratamiento de excepción.

Ultimamente utilizamos una terapéutica que nos ha proporcionado éxitos cuando las condiciónes del tumor lo han permitido; nos referimos a la próximo radioterapia con el tubo de Chaoul (Monopan).

Varios enfermos tratados con Mono-

pan en el Instituto llevan ya un tiempo prudencial de observación, y en ellos la perfecta cicatrización del proceso permite afirmar la curación del mismo. *La base de su indicación es la ausencia de lesiónes ganglionares satélites palpables.*

Respecto a la adenitis neoplásica repetimos hoy lo que en trabajos anteriores ya afirmamos: La lesiones de pene con diagnóstico precoz muchas veces no exigen intervenciónes amplias con extirpación en block de ganglios linfáticos. La repercución neoplásica ganglionar no es muy frecuente y depende del tipo histológico del tumor y del tiempo de evolución; en un gran porcentaje de los casos son simples adenitis inflamatorias, y en consecuencia operaciónes limitadas permiten el retroceso rápido de la inflamación ganglionar. Existen pues muchas veces adenitis inflamatorias y no neoplásicas.

La próxima radioterapia siguiendo la técnica de Chaoul fué empleada en este Instituto primeramente para los cánceres de la piel con el fin de "humanizar lesiónes neoplásicas" cuando ellas eran enormes y no aceptaban tratamientos radicales efectivos. Con esto conseguimos modificar en muchos casos procesos de gran desarrollo, facilitando la cicatrización de lesiónes ulcerosas, suprimiendo el carácter sanioso de la superficie tumoral y modificando el aspecto de la misma.

Este hecho clínico observado permitió su aplicación en los tumores de pene localizados.

Los resultados obtenidos por el momento nos conforman ampliamente, si bien sabemos que el tiempo y la observación son factores indispensables en el problema terapéutico del cáncer y ellos darán su palabra sobre el verdadero valor y la eficacia de este procedimiento fisioterápico.

En lo que respecta a la metástasis ganglionar sólo realizamos la exéresis de la misma en forma sistemática en los casos en que la adenitis cancerosa clinicamente se denuncia; cuando ella no presenta carácter de tal, practicamos primeramente la biopsia y luego sistematicamente la radioterapia profunda, con aparatos de alta tensión.

PRONÓSTICO

Cuál es el pronóstico de los enfermos portadores de un cáncer de pene?

En lo que se refiere a las recidivas, la recidiva "in situ" no es de observación frecuente; cuando se produce se observa casi siempre dentro del primer año de la operación. La recidiva frecuente que da carácter de malignidad es la metástasis ganglionar.

En los tumores espinocelulares cuando la extirpación ganglionar no se ha realizado o se ha hecho imperfectamente, o cuando la radioterapia profunda ha sido insuficiente, la recidiva ganglionar se observa precozmente dentro del primer año. La recidiva satélite en el segundo o tercer año se observa con menos frecuencia.

Una lesión neoplásica de pene que no recidiva despues de tres años autoriza a considerar curado al enfermo.

Las metástasis viscerales con sindrome clinico definido de proceso neoformativo (hepático o pulmonar) son poco frecuentes.

Dijimos en trabajos anteriores que es posible que en autopsias encontremos nidos celulares en órganos diversos, pero en general los enfermos con un cáncer peniano mueren por su lesión local o por su metástasis ganglionar satélite, excepcionalmente por metástasis visceral.

El pronóstico de esta neoformación maligna a localización peniana debiera ser siempre en el 100 por ciento de los casos benigno, dado que su diagnóstico

precoz fácil de realizar permite una terapéutica precoz efectiva y curativa.

Pero desgraciadamente las estadísticas del Instituto no son todo lo halagador que debieran, pues los enfermos se presentan en condiciones lamentables con un proceso neoformativo tan avanzado que presume la invasión ganglionar.

Malos consejos, terapéuticas insuficientes, favoreciendo la evolución de la afección, hacen que el tratamiento radical retardado, resulte muchas veces ineficaz.

La importancia del diagnóstico precoz es enorme; sólo así se puede evitar una operación cruel. Muchas veces vemos llegar al Instituto desgraciados enfermos que después de peregrinar meses y meses con lesiones proliferativas no diagnosticadas en su esencia etiológica han sido sometidos a medicaciones anodinas cuando no cáusticas, que lejos de mejorar agravan la lesión, excitando la génesis cancerosa, favoreciendo la atipia celular de simples papilomas benignos en un principio.

En materia de cáncer la educación de los enfermos es primordial; deben siempre, en el caso de la localización que nos ocupa, recurrir a un médico especializado o a un dispensario apropiado cada vez que vean aparecer el primer síntoma de una lesión sospechosa, sangrante, de tipo ulceroso o productivo, que no cede a los tratamientos habituales y simples.

Deben también nuestros colegas conocer el valor importante que tiene la biopsia y el valor de su realización precoz; la biopsia, acto de ejecución fácil y simple, debe siempre realizarse con frecuencia en los casos de enfermos portadores de afecciones ulcerativas o productivas sospechosas. No olvidemos que las lesiones destructivas de la región peniana no tienen porqué ser siempre lesiones sifilíticas o estreptobacilares y evitemos así someter enfermos durante meses y años a tratamientos específicos, esperanzados en curarlos.

Estos tratamientos no hacen sino agravar el pronóstico de lesiones neoplásicas malignas incipientes. El tratamiento efectivo radical y curativo exige terapéutica con aparatos especiales apropiados y métodos eficientes; y en ese sentido en el Instituto de Medicina Experimental contamos con los adelantos más modernos de la ciencia quirúrgica.

Repetimos que: el pronóstico y el porcentaje de los enfermos curados mejorarán: (1) el día que los pacientes suficientemente instruidos sepan que existen enfermedades graves que no provocan dolor ni fiebre, únicos síntomas alarmantes para el profano que los hace suponer enfermos realmente; (2) el día que los colegas se inculquen y ahonden dos conceptos que en materia de cáncer tienen capital importancia, (*a*) precocidad y frecuencia en la práctica de las biopsias y (*b*) no eternizar ni prolongar tratamientos específicos de prueba ni cauterizaciones prolongadas en lesiones ulcerosas crónicas que son en esencia cánceres en su iniciación.

SUMMARY

Carcinoma of the penis is curable in the majority of cases. A good issue depends on two factors: (*a*) early diagnosis and (*b*) proper treatment.

The radical treatments used at present are: electrosurgery, radium therapy, contact roentgen therapy and diathermocoagulation. The surgical treatment varies according to the extension of the new growth. Simple exeresis is preferred whenever possible, and partial or total amputation is done in more advanced stages, in order to avoid submitting patients to emasculation. Partial

Fig. 9. Cáncer del pene. Localización: glande y surco balanoprepucial. Biopsia: carcinoma pavimentado perlado.

Fig. 11. Cáncer del pene. Localización: prepucio. Carcinoma pavimentoso metatípico.

Fig. 10. Postectomía (bisturí eléctrico) y electrocoagulación del glande. Meato uretral hipospádico. Curación.

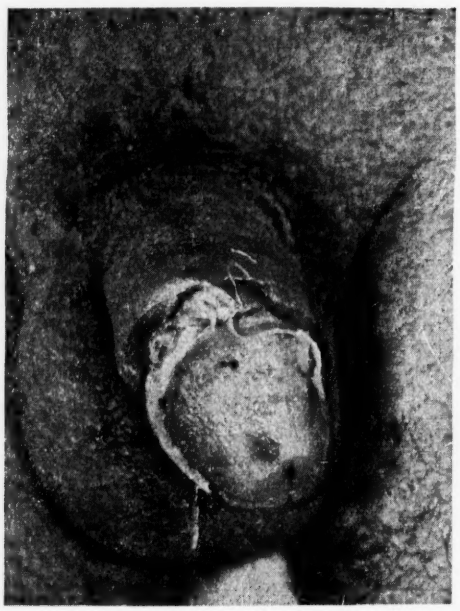


Fig. 12. Postectomía con bisturí eléctrico. Monopán. Radioterapia bi-inguinal. Curación.

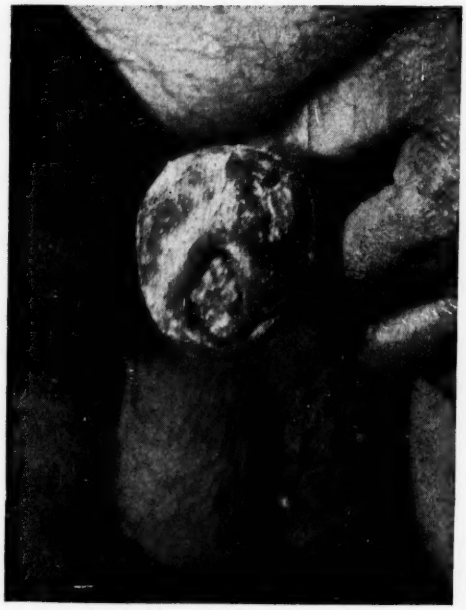


Fig. 13. Cáncer del pene. Localización: meato uretral. Biopsia: carcinoma pavimentoso metatípico.

Fig. 15. Cáncer del pene. Localización: glande y prepucio; infiltración de los cuerpos cavernosos. Biopsia: carcinoma pavimentoso perlado.

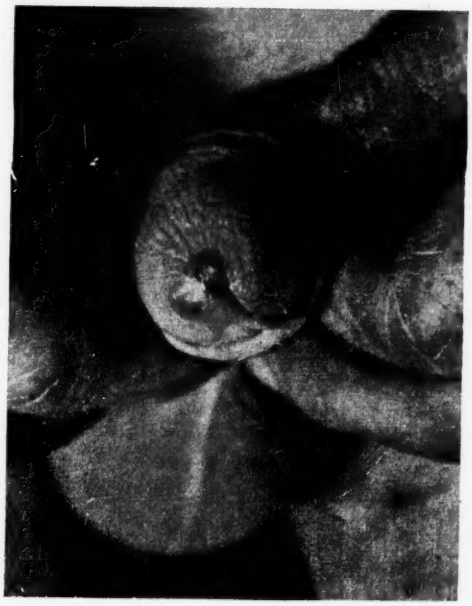


Fig. 14. Diatermocoaguloción y monopán. Curación.

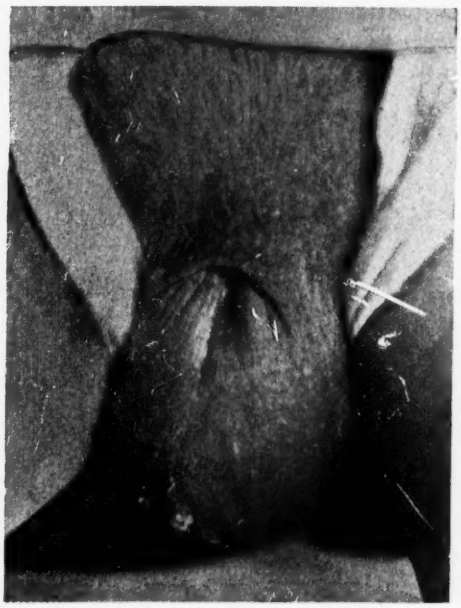


Fig. 15A. Amputación total (bisturí eléctrico). Radioterapia bi-inguinal. Curación.

Fig. 16. Cáncer del pene. Localización surco peno-escrotal. Biopsia carcinoma pavimentoso perlado. Amputación total. Curación.

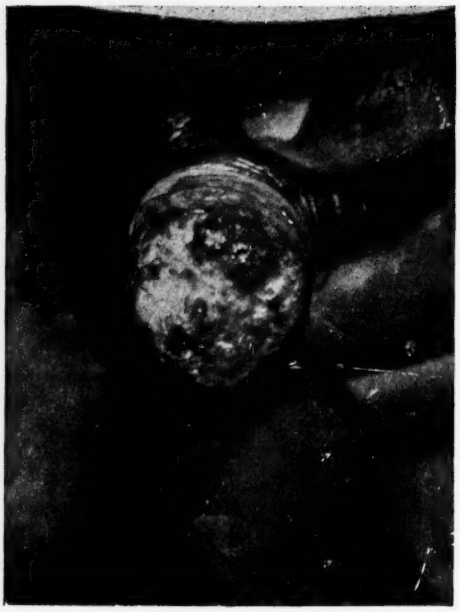


Fig. 18. Cáncer del pene. Localización: glande y surco balanoprepucial. Fimosis congénita. Biopsia: carcinoma pavimentoso perlado.

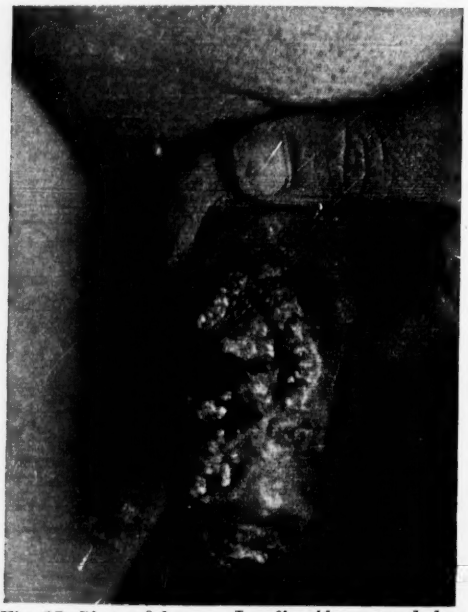


Fig. 17. Cáncer del pene. Localización: surco balanoprepucial y glande. Fimosis congénita. El tumor ulcera la piel del prepucio y se evidencia por la cara dorsal del pene. Infiltración de los cuerpos cavernosos. Amputación total. Curación.

Fig. 19. Amputación total (bisturí eléctrico). Radioterapia bi-inguinal. Curación.

Fig. 20. Cáncer del pene. Localización: piel del pene. Biopsia: carcinoma pavimentoso perlado.

Fig. 22. Cáncer del pene. Localización: glande y prepucio. El proceso neoformativo invade la piel del pene aflorando por la zona dorsal. Fimosis congénita. Biopsia: carcinoma pavimentoso perlado.

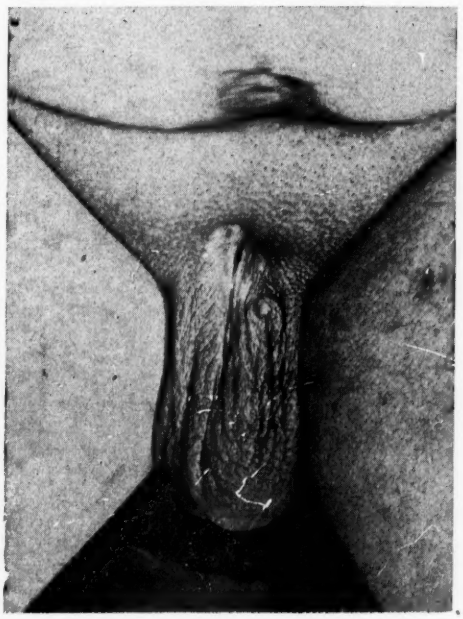


Fig. 21. Amputación total. Curación.

Fig. 23. Amputación total (bisturí eléctrico. Radioterapia bi-inguinal. Curación.

Fig. 24. Cáncer del pene. Localización: sureo balano-prepucial, glande y prepucio. Fimosis congénita. La lesión neoformativa invade y destruye la piel del pene en su región dorsal. Biopsia: carcinoma pavimentoso perlado.

Fig. 26. Cáncer del pene y del escroto. Enorme tumor, que ha destruido el pene, he invadido profundamente el escroto. Biopsia: carcinoma pavimentoso perlado. Metástasis bi-inguinal. Inoperable. Terapéutica paliativa.

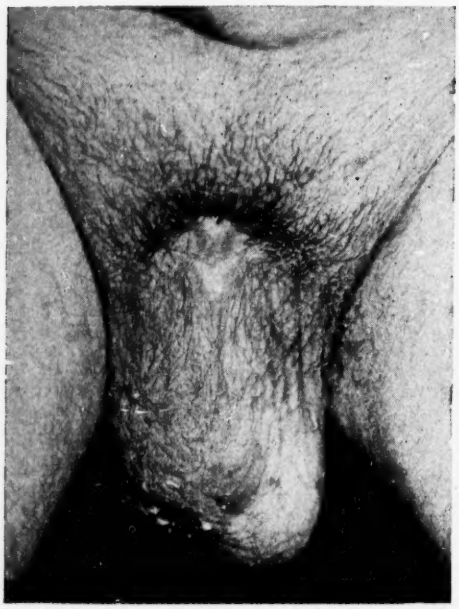


Fig. 25. Amputación total (bisturí eléctrico). Radioterapia bi-inguinal. Curación.

Fig. 26A. Cáncer del pene. Localización: glande, prepucio y cuerpo del pene. Metástasis bi-inguinal. Inoperable. Tratamiento paliativo.

Fig. 27. Cáncer del pene. Localización: cuerpos cavernosos, glande, surco balanoprepucial y prepucio. Fimosis congénita. Nótese como la lesión tumoral ulcera y destruye el prepucio. Biopsia: carcinoma metatípico.

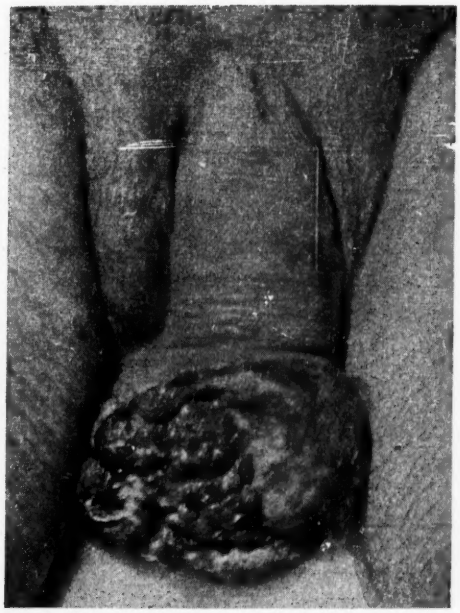


Fig. 29. Cáncer del pene. Localización: prepucio y glande. Biopsia: carcinoma pavimentoso perlado.

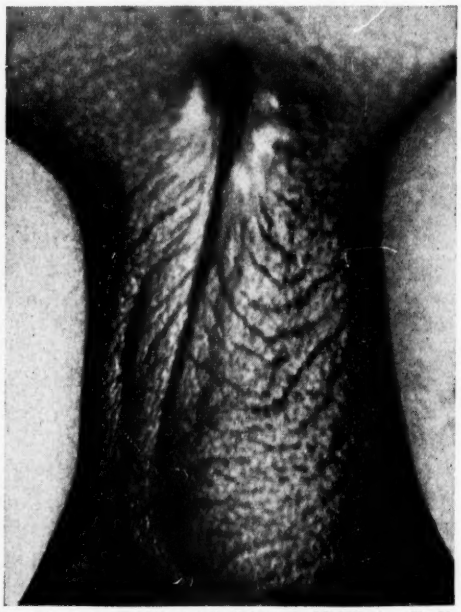


Fig. 28. Amputación total (bisturí eléctrico). Radioterapia bi-inguinal. Curación.

Fig. 30. Amputación parcial (bisturí eléctrico). Radioterapia bi-inguinal. Curación.

excision is the procedure employed most frequently in the Institute for Experimental Medicine. The electric bistouri is invaluable. As to radium therapy, the authors' opinion is categoric. They believe it to be an efficient therapeutic measure but certainly inferior to electrosurgery.

The lymph nodes are systematically preserved if the inflammatory nature of their involvement has been clinically proved. If they are neoplastic, excision of them is inevitable and should be followed by high voltage therapy, according to the stage of the malignant growth.

In the surgical stump, recurrences are rare and usually take place in the course of the first year after the treatment. Recurrences in the lymph nodes are more frequent. As a rule, they also occur early (within the first year), but they may take place after the second, third or fourth year. Clinically, visceral metastases are rare. The organs which may be involved are, in the order of frequency, (1) the lung and (2) the liver.

The mortality from cancer of the penis is 50 per cent, according to the statistics of the Institute of Experimental Medicine. This high percentage is due to the poor local and general conditions, to the time of development of the lesion and to the inadequateness of the treatment to which patients have been submitted before their arrival at the Institute.

Three years without recurrence is generally sufficient to warrant one's considering a treated patient as definitely cured.

The prognosis of cancer in this location ought to improve when people learn to consult a physician at the first suspicious symptom and when physicians remember to perform a biopsy on any new growth before trying various treatments and cauterizations.

Fig. 31. Cáncer del pene. Localización: prepucio y surco balanoprepucial. Biopsia: carcinoma pavimentoso perlado.

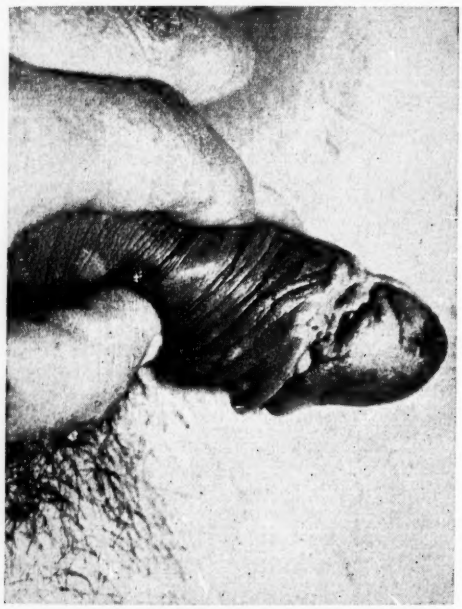


Fig. 32. Postectomía (bisturí eléctrico). Monopán. Curación.

RÉSUMÉ

Le cancer de pénis est dans la plupart des cas parfaîtement curable. Le succès dépend de deux facteurs: (*a*) précocité du diagnostic et (*b*) suffisance du traitement.

Les traitements radicaux de l'heure actuelle sont: l'électrochirurgie, la curiethérapie, la radiothérapie de contact et la diathermocoagulation.

Le traitement chirurgical devra varier selon l'extension de la tumeur, en optant pour l'exérèse simple autant que possible, et n'indiquant l'amputation partielle ou totale que dans des cas plus avancés, pour ne réaliser qu'exceptionnellement l'émasculation.

Quant à la curiethérapie, l'opinion des auteurs est catégorique. Ils croient en sa grande valeur thérapeutique, mais la considèrent inférieure à l'électrochirurgie.

Les ganglions doivent être respectés étant cliniquement en état inflammatoire; dans le cas des ganglions néoplasiques, c'est l'exérèse qui est indiquée, avec radiothérapie de haute tension selon leur état d'évolution.

Les récidives dans le moignon chirurgical sont rares, et si elles se présentent, on les observe généralement au cours de la première année.

Les récidives ganglionaires sont beaucoup plus fréquentes, étant généralement prëcoces (au cours de la première année), mais se présentant aussi plus tard, après la seconde, troisième et quatrième année.

Cliniquement, les métastases viscérales sont exceptionnelles. Les organes qui se trouvent le plus fréquemment envahis sont par ordre de fréquence: (1) le poumon et (2) le foie.

La mortalité par cancer de pénis est de 50 pour cent dans les statistiques de notre Institut.

Ce pourcentage est agravé par les conditions locales et générales peu favorables, par le temps de l'évolution de la lésion et par l'insuffisance du traitement pratiqué antérieurement à l'arrivée à l'Institut.

Une survie de trois ans est généralement suffisante pour considérer un malade traité comme définitivement guéri.

Le pronostic s'améliorera quand les malades sauront qu'ils doivent consulter un médecin au premier indice de la maladie et quand les médecins n'oublieront plus d'effectuer une biopsie de toute néoformation, avant pratiquer des traitements et des cautérisations à titre d'essai.

СВОД

Действительно применимыми радикальными методами являются: электрохирургия, радиотерапия, контактная рэнтгенотерапия и диатэрмокоагуляция.

Хирургический подход зависит от распространения опухоли. Когда возможно, предпочитается обыкновенная резекция. Частичная или тотальная ампутация совершается в более поздней стадии развития. Таким образом только исключительные больные должны подвергнутся эмаскуляции.

Если доказан клинически воспалительный характер вовлеченных лимфатических желез, то они систематически сохраняются. Но если они оказываются неопластическими, то их удаление делается неизбежным и должно быть последовано высокой вольтажной терапией в зависимости от стадии злокачественности.

Мнение авторов относительно радиотерапии является категорическим. Они считают ее очень эффективной терапевтической мерой, но определенно уступающей электрохирургии.

Рецедивы хирургического обрубка очень редки и, обыкновенно, случаются в первый год после лечения.

Рецедивы лимфатических желез более часты. Обыкновенно они тоже случаются рано (в течении первого года), но

иногда даже во втором, третьем и четвертом году.

Авторы считают «метастаз лимфатических желез» синонимом «exitus letalis» (смертного исхода).

Клинически, висцеральные метастазы редки. В порядке частоты органы поражаются (1) легкие и (2) печень.

Согласно статистическим данным института экспериментальной медицины процент смертности от рака penis'a 50%.

Высокая смертность является результатом плохого местного и общего состояния, давности поражения и недостаточности лечения, полученного больным до поступления в институт.

Отсутствие рецедидов в течении трех лет дает основание считать, что больной вылечен.

Прогноз рака в этом месте должен улучшиться, когда люди привыкнут советоваться с врачем при появлении первого подозрительного симптома и когда врачи запомнят, что до того как подвергнуть больного разным способам лечения и прижиганиям, необходимо сделать биопсию.

Просвещение публики, своевременный совет и правильное лечение превратят рак penis'a в болезнь, имеющую очень хороший прогноз.

IN MEMORIAM

EL DR. AMERICO FOSSATI *

(Uruguay)

El 20 de noviembre de 1944, a los 58 años de edad, y mientras desempeñaba la Presidencia de la Sociedad de Cirugía del Uruguay, falleció en Montevideo el Dr. Américo Fossati, cirujano de larga y fecunda actividad en nuestro medio, adornado de las más bellas virtudes y de una acrisolada hombría de bien.

El Dr. Américo Fossati, forjado en un hogar humilde, al que contribuía a sostener mientras hacía su carrera, había nacido el 25 de julio de 1886. Con una extraordinaria dedicación a las duras disciplinas de los estudios médicos, recibió su título de doctor en Medicina y Cirugía en el mes de abril de 1909, a los 22 años de edad. Casi en seguida fué nombrado Jefe de Clínica del Profesor Alfonso Lamas, en cuyo Servicio Quirúrgico trabajaba desde 1904.

En el mismo año 1909 fué designado Primer Médico Interno del Hospital Español y luego, en 1917, Cirujano Mayor del mismo establecimiento, cargo que aún desempeñaba cuando lo sorprendió la muerte. Creó en ese Hospital un centro quirúrgico altamente conceptuado, al punto que la Facultad de Medicina permitía a los estudiantes ganar el curso oficial en el mismo. Desde 1910 era, además, cirujano del Hospital Fermín Ferreira, cargo en el que se dedicó preferentemente a la cirugía del tórax.

Su actividad quirúrgicia fué muy intensa hasta muy poco antes de su muerte, y ella queda reflejada en los numerosos trabajos científicos publicados.

En la actividad docente el Dr. Américo Fossati tuvo, también, una destacada actuación. Era, desde 1927, Profesor Libre de Clínica Quirúrgica. En diversas oportunidades dictó cursos en el Hospital Español, en el Hospital Fermín Ferreira y en el Instituto de Tisiología.

Sus relaciones con la Sociedad de Cirugía del Uruguay fueron siempre muy estrechas. Era socio fundador y ocupó por primera vez la Presidencia de la Sociedad en 1934. Fué un asíduo concurrente a sus sesiones y aportó siempre, sin reticencias ni egoísmus, todo

* Obituario reproducido del *Boletín de la Sociedad de Cirugía del Uruguay.*

(Continua en página 403)

Algias Abdominales Esplacnicas

PROF. DR. MIGUEL LÓPEZ ESNAURRÍZAR, F.I.C.S.
MÉXICO, D. F., MÉXICO

AUNQUE el dolor abdominal tiene clara significación clínica y utilidad defensiva general, dentro de la fisiopatología del dolor, es evidente, sin embargo, que en numerosas ocasiones constituye casi toda la enfermedad, o toma la parte más importante o es solamente la manifestación más molesta del todo.

En estos casos, una terapéutica eficiente del dolor o cura al enfermo, lo alivia de tal modo que lo vuelve curable o solamente lo mejora y le prolonga la vida sin sufrimiento.

Uno de los procedimientos más rápidos y radicales en la terapéutica del dolor consiste en la paralización de los nervios sensitivos en acción, método que tiene su mayor importancia y oportunidad de aplicación cuando no hay recursos para curar desde luego el padecimiento, cuando no puede suprimirse la irritación terminal en el sitio mismo del padecimiento o cuando la terapéutica analgésica es ineficaz.

Al ocuparnos en éste trabajo de los métodos de paralización funcional de los troncos nerviosos abdominales, tenemos que referirnos a dos líneas o sistemas fundamentales, el del simpático y el del vago, pues aunque el primero es más claramente sensitivo, ni uno ni otro tienen la diferenciación funcional tan ostensible como los pares craneales.

Deseamos ocuparnos de la vía simpática, pero antes de ello, lo haremos de la del pneumogástrico, porque de acuerdo con los resultados obtenidos por otros autores y por nosotros, ello forma hasta ahora el anverso o lo negativo de lo que constituye lo fundamental de éste trabajo, esto es, las algias esplácnicas.

En 1912, Exner y Schwartsman relataron 20 casos de crisis gástricas muy dolorosas en las que efectuaron vagotomía anterior subdiafragmática, con resultados mediocres. Latarjet propuso una nueva operación más extensa, con el propósito de suprimir toda inervación vagal del estómago en casos de úlcera péptica y con la mira de "suprimir toda sensación, disminuir la frecuencia e intensidad de las contracciones y reducir la acidez." Sin embargo, como resultado de estas operaciones, se llegó a la conclusión de que la actividad del estómago permanece inalterable al menos con la vagotomía unilateral (McCrea). Por último, Weinstein, Colp, Hollander y Jemerin revisaron la literatura de la vagotomía gástrica, llegando a las conclusiones: (*a*) experimentalmente se observa ligera disminución de la secreción psíquica, mientras que en las demás fases no tiene efecto; (*b*) de los 6 casos de vagotomía que presentan se deduce que en ninguno de ellos pudo obtenerse beneficio terapéutico, y (*c*) la vagotomía no puede recomendarse como procedimiento terapéutico.

Llegamos ahora a lo fundamental de uestro propósito en éste trabajo, que consiste en presentar la experiencia obtenida por nosotros en la otra vía natural, el esplácnico. Un elemento de primera de que hemos dispuesto desde hace muchos años es la anestesia de los esplácnicos, ya que nos muestra, como en una experiencia fisiológica, las modificaciones viscerales, que son: la anes-

tesia, la vasodilatación generalizada y el aumento de la motilidad del tubo digestivo. La fisiología del esplácnico, experimentalmente y clínicamente particularizada especialmente por Leriche, Pende, Allessandri, Zuckerman y Manzanilla, proporciona mayor apoyo a la idea de suprimir la vía simpática como medio terapéutico principal de las algias abdominales.

Con el fin propuesto hemos recurrido a la alcoholización de los esplácnicos, que, por habernos dado resultados satisfactorios en el propósito señalado, nos ha parecido suficiente y por lo tanto innecesario llegar a la esplanicectomía o a la esplanicotomía.

Escogeremos de nuestros archivos casos típicos observados por nosotros: (1) ejemplo de caso en el que el dolor abdominal, de intensidad dramática constituye casi toda la enfermedad, (2) caso en el que el dolor tiene la parte más importante y (3) caso en el que el dolor solamente constituye la parte más molesta.

Caso 1.—*Caso tipo en el que el dolor abdominal, de intensidad dramática, constituye casi toda la enfermedad.*

J. J., obrero textil, de 25 años de edad, sufrió el 30 de septiembre de 1940 un accidente en el trabajo por caída de altura de unos 3 metros, de forma que sufrió contusión abdominal y de la cara anterior del tórax; perdió de inmediato el conocimiento para recuperarlo paulatinamente, después de varios minutos, con sufrimiento de muy intenso dolor en todo el vientre, particularmente en el epigastrio y en la cara anterior del tórax; el dolor era más intenso con los movimientos respiratorios, que por ello se inicieron superficiales, frecuentes e irregulares; la intensidad del dolor aumentaba al intentar incorporarse. En estas condiciones, pálido y sudoroso, el paciente fué trasladado a nuestro sanatorio, donde recibió inmediatamente tratamiento de choque traumático, al mismo tiempo que se adelantaba la exploración para tratar de tener idea de sus lesiones y de su estado general.

Presentaba facies abdominal con expresión de dolor intenso, taquipnea, y localmente escoriaciones epidérmicas y rubicundez, especialmente en el epigastrio; abombamiento epigástrico irregular con endurecimiento pastoso y vaga sensación de crepitación sanguínea de localización parietal que ocultaba a la exploración el plano visceral; área hepática de maticez borrosa en general y casi imperceptible entre la línea media y la paraesternal derecha. Transcurridas dos horas de tratamiento general, con lo que habían mejorado sus condiciones, y tenida cuenta de la dureza abdominal, del borramiento del área hepática, que fundamentaba la posibilidad de ruptura visceral, hicimos una laparatomía exploradora que podría convertirse en terapéutica. No descubrimos lesión visceral, por lo que suturamos la pared. (Ayudante, Dr. Jorge O'cadiz A.)

Aunque la evolución postoperatoria fué normal, las condiciones del paciente continuaron muy precarias por varios meses (hasta febrero de 1941), especialmente por el intenso dolor pungitivo epigástrico, sin irradiaciones, sin relación con las comidas, en forma de crisis de más de una hora de duración, frecuentemente nocturnas (a las 2 de la mañana), con estados lipotímicos, facies abdominal y vómitos, que llegaban a aminorar el malestar; se lograba calmar el dolor con antiespasmódicos y sedantes enérgicos, con calor húmedo local y con la instintiva actitud "de gatillo." Había constipación de los tres tipos muy rebelde a los tratamientos más enérgicos, y en ocasiones vómitos fecaloides.

Con motivo de que éste cuadro dramático se prolongaba de modo desesperante, con períodos de poca menor intensidad, y de que no era evidente el diagnóstico, ya sea sólo ya con la opinión de especialistas gastroenterólogo (Dr. Fournier), neurólogo (Dr. Gamboa), laboratorista (Dr. Rojina), etc., se plantearon hipótesis diagnósticas tan diversas como crisis tabéticas, epilepsia, pitiatismo, helmintiasis, intoxicación, simulación, etc., hipótesis todas que se desvanecían como resultado de estudios de laboratorio o fracaso terapéutico, quedando en nuestra mente el diagnóstico de solaritis traumática, análoga a

otra solaritis (tuberculosa) que hemos visto y tan rebelde como ésta a todo tratamiento antineurítico habitual (quimioterapio y vitaminoterapia, diatermia, etc.).

Con ésta idea, inspirados en la técnica de la anestesia de los esplácnicos, el 8 de febrero de 1941 nos atrevimos a hacer la alcoholización de los esplácnicos, previa procainización, obteniendo desde luego mejoría, que aumentó en pocos días hasta la curación, que incluyó no solo la desaparición de dolor, sino también de los vómitos, la constipación etc. En pocos meses el paciente recuperó su corpulencia y desde entonces continúa enteramente apto a los más rudos trabajos de su empleo.

Caso 2.—*Caso tipo en el que el dolor abdominal constituye la parte más importante de la enfermedad.*

A. R., obrero sombrerero de 36 años de edad, sufría de úlcera del estómago desde hacía cuatro años, con la particularidad de que la gastralgia era muy intensa y solía ser seguida de crisis gástricas. Los tratamientos producían solo resultados paliativos transitorios, hasta que por la extraordinaria intensidad del dolor decidimos hacer alcoholización de los esplácnicos, lo que efectuamos el 11 de octubre de 1942. Se obtuvo completo alivio del dolor y notable mejoría del síndrome ulceroso. Un año después, el 4 de octubre de 1943, con motivo de operación abdominal por apendicitis, exploramos directamente el estómago, sin encontrar huellas de la úlcera. El paciente continúa sano y vigoroso.

Caso 3.—*Caso tipo en que el dolor abdominal constituye solamente la parte más molesta.*

N. N., de 53 años de edad, fué operado de carcinoma incipiente del píloro, por pilorectomía, desgraciadamente sin bisturí eléctrico. A los dos años la lesión se reprodujo con tal malignidad que toda reintervención operatoria fué descartada. El dolor abdominal tuvo el aumento de intensidad diario que ya conocemos en estos casos, hasta que los analgésicos más activos se hicieron ineficaces a pesar de llegar a dosis de intoxicación. Ante la tremenda tragedia del dolor cada vez más intenso, que obligaba y al uso de la morfina, propuse la alcoholización sin otros objetivos que suprimir el dolor, evitar la intoxicación terapéutica y prolongar la vida. Con el Dr. Manuel A. Manzanilla, cirujano dedicado a cirugía neurohormonal, se hizo el bloqueo, obteniéndose con ello, casi inmediatamente la supresión de dolor, lo que permitió al paciente abandonar la cama lleno de optimismo. En pocos días quedó desintoxicado, tomando la apariencia transitoria de una resurrección.

CONCLUSIONES

La alcoholización del esplácnico tiene sus indicaciones y utilidad en el tratamiento de ciertas algias del mismo. Esta utilidad contrasta con el fracaso de la cirugía del vago para el mismo fin.

RESÚMEN

El autor recuerda las tentativas que se han hecho para abolir la sensibilidad y modificar la molitidad del estómago, por medio de la sección de fibras del vago, tentativas que hasta la fecha no han dado resultado favorable. Expone los éxitos que ha obtenido por medio de la alcoholización de los esplácnicos, ilustrando el trabajo con ejemplos típicos, primero de un caso de solaritis intensa y grave que curó totalmente; segundo de un caso de "ulcus rodens" que mejoró notablemente y tercero de un carcinoma gástrico inoperable al que se alivió del dolor y pudo prolongarse la vida del paciente.

SUMMARY

The author reports attempts to abolish the sensibility of the stomach and to modify its motility by means of section of the fibers of the vagus nerve. Up to the time of the report these attempts have not given favorable results. He describes the results which have been obtained by means of injection of alcohol into the splanchnic nerves and cites some typical examples. In a case of intense and severe inflammation of the solar plexus the patient was totally cured; in a case of rodent ulcer notice-

able improvement was obtained, and in a case of inoperable gastric carcinoma the patient was relieved of pain and life was prolonged.

RÉSUMÉ

L'auteur nous communique ses essais d'abolir la sensibilité de l'estomac et de modifier la motilité de cet organe en sectionnant les fibres du vagus. Jusqu'á présent ses expériments ne lui ont pas donné de résultats satisfaisants. Il nous décrit les résultats qu'il a obtenus au moyen d'injections d'alcool dans les nerfs splanchniques et nous relate plusieurs examples typiques. Dans un cas d'inflammation intense et sévère du plexus solaire, il obtint une guérison complète; dans un cas d'ulcère rodent, une amélioration notable fut obtenue; dans un cas de carcinome gastrique il fut possible de supprimer la douleur et de prolonger l'existence du malade.

СВОД

Автор докладывает попытки уничтожить чувствительность желудка и уменьшить его подвижность посредством сечения волокон блуждающего нерва. До времени этого доклада попытки эти благоприятных результатов не принесли. Он описывает результаты достигнутые вспрыскиванием алкоголя спланхнических нервов и дает типичные примеры. Первым был случай очень сильного воспаления solar plexus, который был вполне вылечен; вторым был случай проникающей язвы, в котором было достигнуто большое улучшение; и третьим был случай неоперационного рака желудка, в боли и продолжение жизни.

EL. DR. AMÉRICO FOSSATI

(Continuacion de la página 399)

el caudal de su extraordinaria experiencia en la discusión de los trabajos científicos. En el otoño de su vida, su inquietud científica fué un ejemplo para los cirujanos jóvenes. En 1944 ocupaba por segunda vez la Presidencia de la Sociedad. Allí lo alcanzó la muerte, a la que él esperó como había vivido: trabajando.

El Dr. Américo Fossati había formado un hogar en el que predicaba con el ejemplo. Sus hijos prolongan en sus vidas la hermosa realidad del padre. Y uno de ellos, cirujano como él, sigue las hondas huellas que marcara su progenitor.